DOCUMENT RESUME

ED 176 972	SE 028 855

TITLE	Characteristics of Doctoral Scientists and Engineers in the United States: 1977. Technical Notes and Detailed Statistical Tables.
INSTITUTION	National Science Foundation, Washington, D.C. Div. of Science Resources Studies.
REPORT NO	NSF-79-306
PUB DATE	[79]
NOTE	98p.; For related document, see ED 141 181; Not available in hard copy due to marginal legibility of original document
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Doctoral Degrees; Employment; *Employment Statistics; *Engineers; Mathematics; *National Surveys; Occupational Surveys; Professional Occupations; Sciences; *Scientific Manpower; *Scientists; Social Sciences; Statistics; Surveys

ABSTRACT

Data are presented on demographic and employment characteristics of United States doctoral scientists and engineers. Included are individuals who received their doctorates between 1934 and 1976. In addition to the detailed statistical results of the 1977 survey, this report contains selected data from the two previous surveys. Data are categorized to include characteristics of the population of doctoral scientists and engineers, and total employed by sectors of the economy (educational institutions, business and industry, and Federal Government). Data on employed women are also presented. (Author/RE)

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CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS IN THE UNITED STATES: 1977

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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Technical Notes and
Detailed Statistical Tables

SURVEYS OF SCIENCE RESOURCES SERIES
NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

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GENERAL NOTES

- This set of statistical tables presents data on the demographic and employment characteristics of the Nation's doctoral scientists and engineers. This population consists of individuals in the United States who held science or engineering (S/E) doctorates or who had received a doctorate in non-S/E fields but were employed in S/E positions.
- The 1977 data presented in this report reflect the results of the third survey in this biennial series. Included in the population were individuals who had received their doctorates between January 1, 1934 and June 30, 1976. All surveys in this series encompass a 42-year period of Ph.D. cohorts. Subsequent surveys will continue to take account of new Ph.D. recipients by adding the two most recent graduating cohorts and deleting the two oldest from the sampling frame.
- In addition to the detailed statistical results of the 1977 survey, this report contains selected data from the two previous surveys, conducted in 1973 and 1975. These time-series tables present selected data on the total population and the total employed labor force as well as employment data relating to doctoral scientists and engineers in the major employment sectors of the economy; i.e., educational institutions, business and industry, and the Federal Government. Data relating to employed women are also presented.
- Detailed results and technical aspects of the 1977 survey are presented in the appendixes of this report. The technical notes in appendix A contain information on the survey methodology, coverage, concepts, definitions, and sampling errors. Detailed tabulations from the 1977 survey are presented in appendix B. The questionnaire and specialties list used in the 1977 survey are reproduced in appendix C.
- The first analytical results from the 1977 survey may be found in *Science Resources Studies Highlights*, "Work Activities of Doctoral Scientists and Engineers Show Substantial Change Between 1973 and 1977" (NSF 78-316).

TIME-SERIES TABLES
1973, 1975, and 1977

DOCTORAL SCIENTISTS AND ENGINEERS

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Table 1. Characteristics of the total population of doctoral scientists and engineers in the U. S.

Characteristics	1973		1975		1977	
	Number	Percent	Number	Percent	Number	Percent
Total	238,913	100.0	270,480	100.0	303,267	100.0
Field:						
Physical scientists	53,008	22.2	58,445	21.6	62,055	20.5
Chemists	33,920	14.2	38,422	14.2	40,650	13.4
Physicists/astronomers	19,088	8.0	20,023	7.4	21,405	7.1
Mathematical scientists	13,084	5.5	14,236	5.3	15,406	5.1
Mathematicians	11,581	4.8	12,474	4.6	13,665	4.5
Statisticians	1,503	.6	1,762	.7	1,741	.6
Computer specialists	2,726	1.1	3,496	1.3	5,822	1.9
Environmental scientists	10,930	4.6	12,478	4.6	13,543	4.5
Earth scientists	9,078	3.8	9,836	3.6	10,235	3.4
Oceanographers	1,196	.5	1,311	.5	1,592	.5
Atmospheric scientists	656	.3	1,331	.5	1,716	.6
Engineers	37,261	15.6	43,449	16.1	46,539	15.3
Life scientists	63,583	26.6	70,256	26.0	78,335	25.8
Biological scientists	40,673	17.0	42,741	15.8	46,788	15.4
Agricultural scientists	11,408	4.8	13,519	5.0	15,062	5.0
Medical scientists	11,502	4.8	13,996	5.2	16,485	5.4
Psychologists	27,151	11.4	31,358	11.6	35,716	11.8
Social scientists	31,170	13.0	36,760	13.6	45,849	15.1
Economists	9,316	3.9	10,650	3.9	11,689	3.9
Sociologists/anthropologists	7,219	3.0	8,521	3.2	10,352	3.4
Other social scientists	14,635	6.1	17,589	6.5	23,808	7.9
Sex:						
Men	218,040	91.3	244,909	90.5	271,594	89.6
Women	20,873	8.7	25,571	9.5	31,673	10.4
Race:						
White	216,867	90.8	241,915	89.4	270,305	89.1
Black	2,188	.9	2,596	1.0	2,846	.9
American Indian	375	.2	450	.2	630	.2
Asian	9,449	4.0	12,931	4.8	15,703	5.2
No report	10,034	4.2	12,588	4.7	13,783	4.5
Age:						
Under 30	10,145	4.2	9,831	3.6	8,863	2.9
30-34	52,102	21.8	56,930	21.0	55,461	18.3
35-39	43,611	18.3	54,551	20.2	68,762	22.7
40-44	36,746	15.4	40,665	15.0	46,264	15.3
45-49	31,257	13.1	34,288	12.7	38,671	12.8
50-54	25,312	10.6	29,362	10.9	31,953	10.5
55-59	16,787	7.0	19,162	7.1	23,816	7.9
60-64	10,479	4.4	12,552	4.6	14,838	4.9
65 & over	12,038	5.0	12,710	4.7	14,129	4.7
No report	438	.2	429	.2	490	.2
Employment Status:						
Full-time employed	208,447	87.2	240,566	88.9	266,998	88.0
Science/engineering	197,059	82.5	227,735	84.2	245,208	80.9
Nonscience/engineering	11,388	4.8	12,831	4.7	21,790	7.2
Part-time employed	6,287	2.6	7,327	2.7	7,484	2.5
Science/engineering	5,549	2.3	6,406	2.4	6,349	2.1
Nonscience/engineering	738	.3	921	.3	1,135	.4
Postdoctorates	5,676	2.4	8,155	3.0	9,755	3.2
Unemployed/seeking	2,514	1.1	2,477	.9	3,312	1.1
Not employed/not seeking	1,454	.6	2,374	.9	2,830	.9
Retired/not employed	6,962	2.9	8,652	3.2	9,748	3.2
Other	2,305	1.0	440	.2	540	.2
No report	5,268	2.2	489	.2	2,600	.9

NOTE: Percents may not add to 100 because of rounding.
SOURCE: National Science Foundation.

Table 2. Selected characteristics of employed doctoral scientists and engineers in the U.S.

Characteristics	1973			1975			1977		
	Number	Percent	Median annual salary	Number	Percent	Median annual salary	Number	Percent	Median annual salary
Total	220,410	100.00	$20,700	256,048	100.00	$23,200	284,237	100.0	$25,600
Field:									
Physical scientists	48,466	22.0	21,000	54,638	21.3	23,900	57,450	20.2	26,600
Chemists	30,704	13.9	21,000	35,812	14.0	24,000	37,314	13.1	26,600
Physicists/astronomers	17,762	8.1	21,000	18,826	7.4	23,700	20,136	7.1	26,500
Mathematical scientists	12,145	5.5	19,200	13,639	5.3	21,200	14,573	5.1	23,300
Mathematicians	10,686	4.8	19,000	11,898	4.6	20,900	12,860	4.5	23,100
Statisticians	1,459	.7	20,900	1,741	.7	23,100	1,713	.6	25,100
Computer specialists	2,692	1.2	21,700	3,496	1.4	23,500	5,767	2.0	25,800
Environmental scientists	10,329	4.7	20,700	12,126	4.7	23,500	13,026	4.6	25,800
Earth scientists	8,534	3.9	20,700	9,531	3.7	23,600	9,765	3.4	25,900
Oceanographers	1,157	.5	19,800	1,277	.5	22,200	1,563	.5	24,100
Atmospheric scientists	638	.3	22,500	1,318	.5	24,200	1,698	.6	28,300
Engineers	35,775	16.2	22,300	42,410	16.6	25,200	45,046	15.8	28,600
Life scientists	58,047	26.3	20,100	65,184	25.5	22,300	71,924	25.3	24,700
Biological scientists	36,859	16.7	19,400	39,076	15.3	21,300	42,161	14.8	23,800
Agricultural scientists	10,553	4.8	19,900	12,924	5.0	22,100	14,293	5.0	24,800
Medical scientists	10,635	4.8	22,700	13,184	5.1	25,700	15,470	5.4	28,000
Psychologists	24,850	11.3	20,200	30,073	11.7	22,100	33,724	11.9	24,100
Social scientists	28,106	12.8	20,300	34,482	13.5	22,100	42,727	15.0	24,100
Economists	8,289	3.8	22,300	9,888	3.9	24,500	10,790	3.8	27,000
Sociologists/anthropologists	6,530	3.0	19,300	7,930	3.1	20,700	9,493	3.3	22,200
Other social scientists	13,287	6.0	19,500	16,664	6.5	21,100	22,444	7.9	23,200
Sex:									
Men	203,452	92.3	21,000	233,935	91.4	23,500	256,735	90.3	26,000
Women	16,958	7.7	17,400	22,113	8.6	19,000	27,502	9.7	20,700
Race:									
White	200,691	91.1	21,000	229,322	89.6	23,200	253,309	89.1	25,700
Black	2,034	.9	21,200	2,474	1.0	22,800	2,744	1.0	23,800
Am. Indian	340	.2	(1)	435	.2	20,800	597	.2	23,900
Asian	8,989	4.1	20,000	12,577	4.9	21,500	15,242	5.4	23,800
No report	8,356	3.8	20,800	11,240	4.4	23,100	12,345	4.3	25,700
Age:									
Under 30	9,669	4.4	15,400	9,528	3.7	16,900	8,474	3.0	18,500
30-34	49,726	22.6	17,300	55,217	21.6	18,800	53,562	18.8	20,400
35-39	42,064	19.1	19,600	53,516	20.9	21,500	66,741	23.5	23,600
40-44	35,304	16.0	21,800	40,044	15.6	24,200	45,147	15.9	26,500
45-49	29,945	13.6	24,100	33,640	13.1	26,200	37,626	13.2	29,200
50-54	24,109	10.9	24,900	28,675	11.2	28,100	30,935	10.9	30,900
55-59	15,579	7.1	25,200	18,435	7.2	28,200	22,507	7.9	31,600
60-64	8,982	4.1	25,500	11,255	4.4	28,500	12,944	4.6	31,400
65 & over	4,876	2.2	24,700	5,476	2.1	(2)	5,974	2.1	31,200
No report	156	.1	24,300	262	.1	24,200	327	.1	26,600
Sector of employment:									
Business & industry	53,403	24.2	23,300	64,630	25.2	26,000	71,464	25.1	29,900
Educational institutions	129,408	58.7	19,100	149,184	58.3	21,400	163,101	57.4	23,700
4-year coll./univ.	124,901	56.7	19,200	143,701	56.1	21,500	156.452	55.0	23,800
2-year college	2,962	1.3	17,800	3,567	1.4	19,100	4,634	1.6	20,900
Elem./sec. school	1,545	.7	19,300	1,916	.7	20,500	2,015	.7	22,400
Hospital/clinic	4,543	2.1	19,400	7,469	2.9	21,800	8,587	3.0	23,600
Nonprofit organizations	8,006	3.6	21,700	8,337	3.3	24,400	10,188	3.6	26,800
Federal Government	18,200	8.3	23,500	18,995	7.4	26,300	21,353	7.5	29,700
Military/Commissioned Corps	1,977	.9	(2)	2,130	.8	(2)	2,282	.8	(2)
State government	3,001	1.4	19,500	3,015	1.2	20,900	3,783	1.3	21,600
Other government	1,255	.6	19,000	1,880	.7	22,900	1,545	.5	22,100
Other	331	.2	21,100	82	(2)	(1)	584	.2	37,500
No report	286	.1	(1)	326	.1	(1)	1,350	.5	(1)

Primary work activity:									
Research and development	71,460	32.4	20,600	82,360	32.2	23,000	93,460	32.9	25,600
Basic research	34,258	15.5	19,900	38,144	14.9	22,200	43,545	15.3	24,600
Applied research	28,700	13.0	21,000	32,885	12.8	23,300	36,413	12.8	26,300
Development	8,502	3.9	21,100	11,331	4.4	23,600	13,502	4.8	26,100
Management or administration	46,172	20.9	26,700	51,778	20.2	29,500	60,464	21.3	31,900
Of R&D	26,223	11.9	27,000	28,669	11.2	30,100	30,733	10.8	33,100
Other than R&D	13,258	6.0	25,700	15,720	6.1	27,800	22,150	7.8	30,200
Of both	6,691	3.0	27,500	7,389	2.9	30,200	7,581	2.7	32,200
Teaching	80,012	36.3	18,900	91,159	35.6	20,600	90,392	31.8	22,600
Consulting	4,055	1.8	23,200	5,516	2.2	25,400	6.141	2.2	28,200
Sales/professional services	8,064	3.7	20,700	11,672	4.6	21,900	15,183	5.3	24,700
Other	6,959	3.2	(1)	7,485	2.9	22,100	12,785	4.5	24,900
No report	3,688	1.7	21,400	6,078	2.4	23,700	5,812	2.0	25,400

[1] No median computed for groups with fewer than 20 individuals reporting salary.
[2] Data not available.
[3] Less than .05 percent.

NOTE: Percents may not add to 100 because of rounding. Median salaries computed for full-time employed civilians only.
SOURCE: National Science Foundation

Table 3. Number and median annual salaries of doctoral scientists and engineers employed in educational institutions by field

Field	1973				1975				1977			
	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary
Total	129,408	100.0	58.7	$19,100	149,184	100.0	58.3	$21,400	163,101	100.0	57.4	$23,700
Physical scientists	21,964	17.0	45.3	18,300	25,681	17.2	47.0	21,100	27,081	16.6	47.1	23,600
Chemists	11,877	9.2	38.7	17,900	14,229	9.5	39.7	20,600	14,792	9.1	39.6	22,800
Physicists/astronomers	10,087	7.8	56.8	18,900	11,452	7.7	60.8	22,000	12,289	7.5	61.0	24,400
Mathematical scientists	10,461	8.1	86.1	18,600	11,733	7.9	86.0	20,500	12,228	7.5	83.9	22,700
Mathematicians	9,399	7.3	88.0	18,500	10,423	7.0	87.6	20,400	11,018	6.8	85.7	22,600
Statisticians	1,062	.8	72.8	19,800	1,310	.9	75.2	22,200	1,210	.7	70.6	23,200
Computer specialists	1,374	1.1	51.0	21,200	1,700	1.1	48.6	22,700	2,128	1.3	36.9	24,400
Environmental scientists	5,198	4.0	50.3	18,800	5,976	4.0	49.3	21,000	6,312	3.9	48.5	23,600
Earth scientists	4,181	3.2	49.0	18,600	4,619	3.1	48.5	20,900	4,641	2.8	47.5	23,400
Oceanographer	711	.5	61.5	19,200	800	.5	62.6	19,700	971	.6	62.1	23,600
Atmospheric scientists	306	.2	48.0	21,600	557	.4	42.3	23,200	700	.4	41.2	25,200
Engineers	13,016	10.1	36.4	20,600	14,903	10.0	35.1	23,600	15,911	9.8	35.3	26,500
Life scientists	39,242	30.3	67.6	18,900	43,792	29.4	67.2	20,900	47,471	29.1	66.0	23,500
Biological scientists	26,837	20.7	72.8	18,500	28,893	19.4	73.9	20,400	30,829	18.9	73.1	22,800
Agricultural scientists	6,563	5.1	62.2	18,700	7,840	5.3	60.7	21,000	8,331	5.1	58.3	23,700
Medical scientists	5,842	4.5	54.9	21,200	7,059	4.7	53.5	24,100	8,311	5.1	53.7	25,800
Psychologists	15,106	11.7	60.8	19,200	17,703	11.9	58.9	21,000	18,572	11.4	55.1	22,700
Social scientists	23,047	17.8	82.0	19,500	27,696	18.6	80.3	21,200	33,398	20.5	78.2	23,100
Economists	6,060	4.7	73.1	20,800	6,925	4.6	70.0	22,800	7,496	4.6	69.5	25,100
Sociologists/anthropologists	6,001	4.6	91.9	19,200	7,354	4.9	92.7	20,500	8,547	5.2	90.0	22,100
Other social scientists	10,986	8.5	82.7	18,800	13,417	9.0	80.5	20,400	17,355	10.6	77.3	22,700

NOTES: Percents may not add to 100 because of rounding.
Median salaries completed for full-time employed civilians only.
SOURCE: National Science Foundation

Table 4. Number of doctoral scientists and engineers employed in educational institutions by age

Age	1973			1975			1977		
	Number	Percent	Percent of total employed	Number	Percent	Percent of total employed	Number	Percent	Percent of total employed
Total . .	129,408	100.0	58.7	149,184	100.0	58.3	163,101	100.0	57.4
Under 30. . .	5,902	4.6	61.0	5,803	3.9	60.9	5,423	3.3	64.0
30-34	29,040	22.4	58.4	31,289	21.0	58.7	30,126	18.5	56.2
35-39	24,919	19.3	59.2	31,014	20.8	58.0	37,225	22.8	55.8
40-44	20,802	16.1	58.9	23,638	15.8	59.0	25,832	15.8	57.2
45-49	17,524	13.5	58.5	20,001	13.4	59.5	22,178	13.6	56.9
50-54	13,698	10.6	56.8	16,473	11.0	57.4	17,901	11.0	57.9
55-59	8,971	6.9	57.6	10,988	7.4	59.6	13,112	8.0	56.3
60-64	5,499	4.2	61.2	6,711	4.5	59.6	7,697	4.7	59.5
65 & over. . .	2,992	2.3	61.4	3,164	2.1	57.6	3,421	2.1	57.3
No report. . .	61	(1)	39.1	105	.1	40.1	186	.1	56.9

[1] Less than .05 percent.

NOTE: Percents may not add to 100 because of rounding.

SOURCE: National Science Foundation

Table 5. Number of doctoral scientists and engineers employed in educational institutions by primary work activity

Primary work activity	1973			1975			1977		
	Number	Percent	Percent of total employed	Number	Percent	Percent of total employed	Number	Percent	Percent of total employed
Total	129,408	100.0	58.7	149,184	100.0	58.3	163,101	100.0	57.4
Research and development	30,716	23.7	43.0	35,608	23.9	43.2	42,617	26.1	45.6
Basic research.	22,484	17.4	65.6	25,348	17.0	66.5	30,039	18.4	69.0
Applied research.	7,616	5.9	26.5	9,570	6.4	29.1	11,076	6.8	30.4
Development	616	.5	7.2	690	.5	6.1	1,502	.9	11.1
Management or administration.	13,627	10.5	29.5	15,450	10.4	29.8	20,036	12.3	33.1
Of R&D.	4,548	3.5	17.3	5,146	3.4	17.9	6,135	3.8	20.0
Other than R&D.	6,211	4.8	46.8	6,844	4.6	43.5	10,079	6.2	45.5
Of both.	2,868	2.2	42.9	3,460	2.3	46.8	3,822	2.3	50.4
Teaching	78,940	61.0	98.7	90,339	60.6	99.1	89,286	54.7	98.8
Consulting.	544	.4	13.4	547	.4	9.9	955	.6	15.6
Sales/professional services	1,672	1.3	20.7	2,562	1.7	21.9	3,263	2.0	21.5
Other	1,775	1.4	25.5	1,271	.9	17.0	4,279	2.6	33.5
No report.	2,134	1.6	57.9	3,407	2.3	56.1	2,665	1.6	45.9

NOTE: Percents may not add to 100 because of rounding.

SOURCE: National Science Foundation

Table 6. Number and median annual salaries of doctoral scientists and engineers employed in business and industry by field

Field	1973				1975				1977			
	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary
Total	53,403	100.0	24.2	$23,300	64,630	100.0	25.2	$26,000	71,464	100.0	25.1	$29,900
Physical scientists	19,659	36.8	40.6	22,700	22,117	34.2	40.5	25,900	22,980	32.2	40.0	29,900
Chemists	15,746	29.5	51.3	22,600	18,085	28.0	50.5	25,900	18,664	26.1	50.0	30,000
Physicists/astronomers	3,913	7.3	22.0	23,700	4,032	6.2	21.4	25,900	4,316	6.0	21.4	29,700
Mathematical scientists	873	1.6	7.2	24,100	1,053	1.6	7.7	25,600	1,282	1.8	8.8	27,400
Mathematicians	672	1.3	6.3	24,000	836	1.3	7.0	26,100	996	1.4	7.7	27,300
Statisticians	201	.4	13.8	25,100	217	.3	12.5	24,500	286	.4	16.7	27,800
Computer specialists	998	1.9	37.1	22,300	1,414	2.2	40.4	24,100	3,058	4.3	53.0	26,700
Environmental scientists	2,204	4.1	21.3	22,600	2,918	4.5	24.1	26,200	3,103	4.3	23.8	28,600
Earth scientists	2,083	3.9	24.4	22,500	2,671	4.1	28.0	26,500	2,700	3.8	27.6	28,600
Oceanographers	96	.2	8.3	(1)	76	.1	6.0	(1)	135	.2	8.8	(1)
Atmospheric scientists	25	(2)	3.9	(1)	171	.3	13.0	22,600	268	.4	15.8	29,200
Engineers	17,766	33.3	49.7	23,300	22,118	34.2	52.2	26,100	22,870	32.0	50.8	30,000
Life scientists	7,246	13.6	12.5	23,300	8,834	13.7	13.6	25,500	10,064	14.1	14.0	28,700
Biological scientists	3,326	6.2	9.0	22,800	3,498	5.4	9.0	24,800	4,011	5.6	9.5	27,400
Agricultural scientists	1,796	3.4	17.0	21,800	2,517	3.9	19.5	23,200	2,855	4.0	20.0	26,800
Medical scientists	2,124	4.0	20.0	26,300	2,819	4.4	21.4	29,700	3,195	4.5	20.7	33,200
Psychologists	3,081	5.8	12.4	30,000	4,124	6.4	13.7	30,500	5,525	7.7	16.4	33,300
Social scientists	1,576	3.0	5.6	27,500	2,052	3.2	6.0	28,300	2,582	3.6	6.0	30,200
Economists	944	1.8	11.4	29,700	1,234	1.9	12.5	30,900	1,365	1.9	12.8	34,100
Sociologists/anthropologists	125	.2	1.9	(1)	94	.1	1.2	(1)	193	.3	2.0	(1)
Other social scientists	507	.9	3.8	25,200	724	1.1	4.3	23,300	1,004	1.4	4.5	26,800

[1] No median computed for groups with fewer than 20 individuals reporting salary.

[2] Less than .05 percent.

NOTES: Percents may not add to 100 because of rounding.

Median salaries computed for full-time employed civilians only.

SOURCE: National Science Foundation

Table 7. Number of doctoral scientists and engineers employed in business and industry by age

Age	1973			1975			1977		
	Number	Percent	Percent of total employed	Number	Percent	Percent of total employed	Number	Percent	Percent of total employed
Total	53,403	100.0	24.2	64,630	100.0	25.2	71,464	100.0	25.1
Under 30	1,999	3.7	20.7	2,059	3.2	21.6	1,760	2.5	20.8
30-34	12,271	23.0	24.7	14,842	23.0	26.9	13,632	19.1	25.5
35-39	10,432	19.5	24.8	13,778	21.3	25.7	18,193	25.5	27.3
40-44	8,499	15.9	24.1	9,983	15.4	24.9	11,399	16.0	25.2
45-49	7,107	13.3	23.7	7,982	12.4	23.7	8,993	12.6	23.9
50-54	6,283	11.8	26.1	7,374	11.4	25.7	7,316	10.2	23.6
55-59	3,870	7.2	24.8	4,590	7.1	24.9	5,570	7.8	24.7
60-64	1,957	3.7	21.8	2,713	4.2	24.1	3,128	4.4	24.2
65 & over	932	1.7	19.1	1,207	1.9	22.0	1,394	2.0	23.3
No report	53	.1	34.	102	.2	38.9	79	.1	24.2

NOTE: Percents may not add to 100 because of rounding.

SOURCE: National Science Foundation

Table 8. Number of doctoral scientists and engineers employed in business and industry by primary work activity

Primary work activity	1973			1975			1977		
	Number	Percent	Percent of total employed	Number	Percent	Percent of total employed	Number	Percent	Percent of total employed
Total	53,403	100.0	24.2	64,630	100.0	25.2	71,464	100.0	25.1
Research and development	23,758	44.5	33.2	28,739	44.5	34.9	31,339	43.9	33.5
Basic research	3,525	6.6	10.3	4,252	6.6	11.1	4,631	6.5	10.6
Applied research	13,212	24.7	46.0	15,115	23.4	46.0	16,537	23.1	45.4
Development	7,021	13.1	82.6	9,372	14.5	82.7	10,171	14.2	75.3
Management or administration	19,840	37.2	43.0	22,678	35.1	43.8	23,934	33.5	39.6
Of R&D	14,242	26.7	54.3	15,718	24.3	54.8	15,917	22.3	51.8
Other than R&D	3,485	6.5	26.3	4,721	7.3	30.0	6,149	8.6	27.8
Of both	2,113	4.0	31.6	2,239	3.5	30.3	1,868	2.6	24.6
Teaching	191	.4	.2	182	.3	.2	242	.3	.3
Consulting	2,781	5.2	68.6	4,052	6.3	73.5	4,133	5.8	67.3
Sales/professional services	3,001	5.6	37.2	4,401	6.8	37.7	6,236	8.7	41.1
Other	2,986	5.6	42.9	3,223	5.0	43.1	4,389	6.1	34.3
No report	844	1.6	22.9	1,355	2.1	22.3	1,191	1.7	20.5

NOTE: Percents may not add to 100 because of rounding.
SOURCE: National Science Foundation

Table 9. Number and median annual salaries of doctoral scientists and engineers employed by the Federal Government[1] by field

Field	1973				1975				1977			
	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary
Total	18,200	100.0	8.3	$23,500	18,995	100.0	7.4	$26,300	21,353	100.0	7.5	$29,700
Physical scientists	4,104	22.5	8.5	23,400	3,745	19.7	6.9	26,000	3,941	18.5	6.9	29,700
Chemists	1,645	9.0	5.4	23,700	1,684	8.9	4.7	26,400	1,810	8.5	4.9	29,100
Physicists/astronomers	2,459	13.5	13.8	23,300	2,061	10.9	10.9	25,700	2,131	10.0	10.6	30,100
Mathematical scientists	487	2.7	4.0	23,600	556	2.9	4.1	27,700	593	2.8	4.1	29,300
Mathematicians	355	2.0	3.3	22,900	372	2.0	3.1	26,000	438	2.1	3.4	29,400
Statisticians	132	.7	9.0	26,200	184	1.0	10.6	30,200	155	.7	9.0	([2])
Computer specialists	123	.7	4.6	22,200	194	1.0	5.5	25,000	251	1.2	4.4	30,500
Environmental scientists	1,959	10.8	19.0	23,800	2,210	11.6	18.2	27,500	2,415	11.5	18.5	30,700
Earth scientists	1,539	8.5	18.0	24,100	1,557	8.2	16.3	27,700	1,634	7.7	16.7	30,600
Oceanographer	197	1.1	17.0	22,500	239	1.3	18.7	28,700	287	1.3	18.4	28,300
Atmospheric scientists	223	1.2	35.0	23,400	414	2.2	31.4	27,200	494	2.3	29.1	31,400
Engineers	2,730	15.0	7.6	23,400	3,029	15.9	7.1	26,700	3,519	16.5	7.8	30,000
Life scientists	6,108	33.6	10.5	22,800	6,279	33.1	9.6	25,400	6,760	31.7	9.4	28,400
Biological scientists	3,444	18.9	9.3	22,400	3,442	18.1	8.8	25,100	3,367	15.8	8.0	27,900
Agricultural scientists	1,822	10.0	17.3	22,600	2,039	10.7	15.8	25,000	2,496	11.7	17.5	27,700
Medical scientists	842	4.6	7.9	26,000	798	4.2	6.1	29,100	897	4.2	5.8	32,400
Psychologists	1,237	6.8	5.0	23,800	970	5.1	3.2	26,800	1,231	5.8	3.7	30,600
Social scientists	1,452	8.0	5.2	28,000	2,012	10.6	5.8	29,300	2,643	12.4	6.2	31,400
Economists	651	3.6	7.9	26,800	918	4.8	9.3	27,600	950	4.4	8.8	32,900
Sociologists/anthropologists	64	.4	1.0	([2])	155	.8	2.0	([2])	132	.6	1.4	([2])
Other social scientists	737	4.0	5.5	29,000	939	4.9	5.6	30,900	1,561	7.3	7.0	31,300

[1] Civilian Employees only.
[2] No median computed for groups with fewer than 20 individuals reporting salary.
NOTES: Percents may not add to 100 because of rounding.
Median salaries computed for full-time employed civilians only.
SOURCE: National Science Foundation

Table 10. Number of doctoral scientists and engineers employed by the Federal Government[1] by age

Age	1973			1975			1977		
	Number	Percent	Percent of total employed	Number	Percent	Percent of total employed	Number	Percent	Percent of total employed
Total . .	18,200	100.0	8.3	18,995	100.0	7.4	21,353	100.0	7.5
Under 30. . .	639	3.5	6.6	549	2.9	5.8	308	1.4	3.6
30-34	3,628	19.9	7.3	3,519	18.5	6.4	3,693	17.3	6.9
35-39	3,205	17.6	7.6	3,916	20.6	7.3	4,747	22.2	7.1
40-44	2,961	16.3	8.4	3,200	16.8	8.0	3,766	17.6	8.3
45-49	2,770	15.2	9.3	2,796	14.7	8.3	3,210	15.0	8.5
50-54	2,270	12.5	9.4	2,249	11.8	7.8	2,640	12.4	8.5
55-59	1,578	8.7	10.1	1,467	7.7	8.0	1,707	8.0	7.6
60-64	719	4.0	8.0	910	4.8	8.1	907	4.2	7.0
65 & over. . .	430	2.4	8.8	375	2.0	6.8	363	1.7	6.1
No report. . .	(2)	(2)	(2)	12	.1	4.6	12	.1	3.7

[1] Civilian employees only.
[2] No cases reported.
[3] Less than .05 percent.
NOTE: Percents may not add to 100 because of rounding.
SOURCE: National Science Foundation

Table 11. Number of doctoral scientists and engineers employed by the Federal Government[1] by primary work activity

Primary work activity	1973			1975			1977		
	Number	Percent	Percent of total employed	Number	Percent	Percent of total employed	Number	Percent	Percent of total employed
Total	18,200	100.0	8.3	18,995	100.0	7.4	21,353	100.0	7.5
Research and development	10,012	55.0	14.0	10,375	54.6	12.6	10,843	50.8	11.6
Basic research.	4,737	26.0	13.8	4,671	24.6	12.2	4,721	22.1	10.8
Applied research.	4,804	26.4	16.7	5,045	26.6	15.3	5,209	24.4	14.3
Development	471	2.6	5.5	659	3.5	5.8	913	4.3	6.8
Management or administration.	6,191	34.0	13.4	6,132	32.3	11.8	7,660	35.9	12.7
Of R&D.	4,498	24.7	17.2	4,718	24.8	16.5	5,405	25.3	17.6
Other than R&D.	1,042	5.7	7.9	862	4.6	5.6	1,527	7.2	6.9
Of both.	651	3.6	9.7	532	2.8	7.2	728	3.4	9.6
Teaching	248	1.4	.3	142	.7	.2	150	.7	.2
Consulting.	167	.9	4.1	255	1.3	4.6	277	1.3	4.5
Sales/professional services	548	3.0	6.8	327	1.7	2.8	345	1.6	2.3
Other	821	4.5	11.8	1,227	6.5	16.4	1,854	8.7	14.5
No report.	213	1.2	5.8	537	2.8	8.8	224	1.0	3.9

[1] Civilian employees only
NOTE: Percents may not add to 100 because of rounding
SOURCE: National Science Foundation

Table 12. Selected characteristics of employed women doctoral scientists and engineers in the U.S.

Characteristics	1973				1975				1977			
	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary
Total	16,956	100.0	7.7	$17,400	22,113	100.0	8.6	$19,000	27,502	100.0	9.7	$20,700
Field:												
Physical scientists	1,897	11.2	3.9	17,400	2,521	11.4	4.6	19,100	2,908	10.6	5.1	21,200
Chemists	1,461	8.6	4.8	17,300	2,046	9.3	5.7	19,000	2,354	8.6	6.3	20,900
Physicists/astronomers	436	2.6	2.5	17,700	475	2.1	2.5	19,300	554	2.0	2.8	23,100
Mathematical scientists	775	4.6	6.4	17,100	907	4.1	6.7	18,300	1,048	3.8	7.2	19,900
Mathematicians	701	4.1	6.6	16,800	822	3.7	6.9	18,100	934	3.4	7.3	19,900
Statisticians	74	.4	5.1	19,500	85	.4	4.9	22,100	114	.4	6.7	19,800
Computer specialists	88	.5	3.3	17,700	147	.7	4.2	18,000	233	.8	4.0	20,800
Environmental scientists	262	1.5	2.5	17,000	325	1.5	2.7	19,000	439	1.6	3.4	19,700
Earth scientists	205	1.2	2.4	16,700	242	1.1	2.5	18,200	293	1.1	3.0	20,000
Oceanographers	37	.2	3.2	(1)	51	.2	4.0	(1)	75	.3	4.8	19,200
Atmospheric scientists	20	.1	3.1	(1)	32	.1	2.4	(1)	71	.3	4.2	19,200
Engineers	139	.8	.4	19,600	235	1.1	.6	20,800	283	1.0	.6	22,900
Life scientists	6,120	36.1	10.5	17,300	7,534	34.1	11.6	18,900	8,983	32.7	12.5	21,000
Biological scientists	4,896	28.9	13.3	17,100	5,797	26.2	14.8	18,400	6,684	24.3	15.9	20,500
Agricultural scientists	131	.8	1.2	(1)	167	.8	1.3	20,000	264	1.0	1.8	20,200
Medical scientists	1,093	6.4	10.3	18,300	1,570	7.1	11.9	20,600	2,035	7.4	13.2	22,800
Psychologists	4,782	28.2	19.2	18,200	6,349	28.7	21.1	19,600	7,645	27.8	22.7	20,600
Social scientists	2,895	17.1	10.3	17,600	4,095	18.5	11.9	18,700	5,963	21.7	14.0	20,200
Economists	476	2.8	5.7	19,300	614	2.8	6.2	21,400	788	2.9	7.3	23,600
Sociologists/anthropologists	1,227	7.2	18.8	17,100	1,675	7.6	21.1	18,500	2,286	8.3	24.1	19,700
Other social scientists	1,192	7.0	9.0	17,400	1,806	8.2	10.8	18,200	2,889	10.5	12.9	19,800
Age:												
Under 30	1,026	6.1	10.6	14,400	1,534	6.9	16.1	15,900	1,640	6.0	19.4	17,400
30-34	3,546	20.9	7.1	14,900	4,970	22.5	9.0	16,800	6,621	24.1	12.4	18,400
35-39	2,767	16.3	6.6	16,600	4,082	18.5	7.6	18,300	5,641	20.5	8.5	20,000
40-44	2,445	14.4	6.9	17,900	2,810	12.7	7.0	19,900	3,479	12.6	7.7	21,700
45-49	2,488	14.7	8.3	18,700	2,917	13.2	8.7	21,300	3,291	12.0	8.7	23,100
50-54	1,845	10.9	7.7	19,500	2,407	10.9	8.4	22,300	2,887	10.5	9.3	24,700
55-59	1,379	8.1	8.9	20,200	1,467	6.6	8.0	21,600	1,876	6.8	8.3	24,200
60-64	847	5.0	9.4	20,500	1,160	5.2	10.3	22,700	1,233	4.5	9.5	25,000
65 & over	570	3.4	11.7	19,800	703	3.2	12.8	22,400	726	2.6	12.2	25,100
No report	45	.3	26.8	(1)	63	.3	24.0	(1)	108	.4	33.0	(1)
Sector of employment:												
Business & industry	1,363	8.0	2.6	19,700	2,141	9.7	3.3	22,200	2,959	10.8	4.1	24,400
Educational institutions	12,160	71.7	9.4	17,100	15,536	70.3	10.4	18,400	18,773	68.3	11.5	20,000
4-year coll./univ.	11,128	65.6	8.9	17,100	14,236	64.4	9.9	18,400	17,144	62.3	11.0	20,000
2-year college	549	3.2	16.5	17,000	701	3.2	19.7	18,700	927	3.4	20.0	19,700
Elem./sec. school	483	2.8	31.3	19,900	599	2.7	31.3	20,700	702	2.6	34.8	21,000
Hospital/clinic	967	5.7	21.3	17,500	1,745	7.9	23.4	19,400	1,958	7.1	22.8	21,000
Nonprofit organization	783	4.6	9.8	17,900	917	4.1	11.0	19,600	1,445	5.3	14.2	21,100
Federal Government	971	5.7	5.3	22,100	1,033	4.7	5.4	24,700	1,273	4.6	6.0	26,600
Military/Comm. Corps	19	.1	1.0	(1)	39	.2	1.8	(1)	47	.2	2.1	(1)
State government	388	2.3	12.9	19,000	393	1.8	13.0	19,700	495	1.8	13.1	19,500
Other government	188	1.1	15.0	17,300	235	1.1	12.5	19,900	345	1.3	22.3	21,700
Other	74	.4	22.4	19,700	15	.1	18.3	(1)	23	.1	3.9	(1)
No report	47	.3	16.4	18,500	59	.3	18.1	(1)	184	.7	13.6	(1)

Primary work activity:												
Research and development	4,654	27.4	6.5	17,400	5,998	27.1	7.3	19,100	7,594	27.6	8.1	21,000
Basic research	3,500	20.6	10.2	16,800	4,450	20.1	11.7	18,400	5,434	19.8	12.5	20,600
Applied research	1,004	5.9	3.5	19,100	1,323	6.0	4.0	20,400	1,755	6.4	4.8	22,200
Development	150	.9	1.8	17,200	225	1.0	2.0	19,500	405	1.5	3.0	20,500
Management or administration	1,837	10.8	4.0	22,300	2,441	11.0	4.7	22,900	3,438	12.5	5.7	25,100
Of R&D	704	4.2	2.7	23,200	893	4.0	3.1	24,300	1,234	4.5	4.0	26,300
Other than R&D	797	4.7	6.0	21,700	1,142	5.2	7.3	22,100	1,696	6.2	7.7	24,100
Of both	336	2.0	5.0	22,100	406	1.8	5.5	22,900	508	1.8	6.7	25,500
Teaching	7,504	44.3	9.4	17,000	9,480	42.9	10.4	18,200	10,396	37.8	11.5	16,500
Consulting	333	2.0	8.2	18,300	400	1.8	7.3	20,500	495	1.8	8.1	22,300
Sales/professional services	1,647	9.7	20.4	18,200	2,348	10.6	20.1	20,000	3,222	11.7	21.2	21,200
Other	641	3.8	9.2	(2)	822	3.7	11.0	(2)	1,652	6.0	12.9	(2)
No report	342	2.0	9.3	17,600	624	2.8	10.3	20,700	705	2.6	12.1	20,300

[1] No median computed for groups with fewer than 20 individuals reporting salary.

[2] Data not available.

NOTE: Percents may not add to 100 because of rounding. Median salaries computed for full-time employed civilians only.

SOURCE: National Science Foundation

APPENDIXES

A. Technical Notes
B. Detailed Statistical Tables
C. Reproduction of Questionnaire

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APPENDIX A

Technical Notes

The Roster of Doctoral Scientists and Engineers was compiled from a number of sources, including the following: National Academy of Sciences/National Research Council's (NAS/NRC) Doctorate Records File — an accumulated record of data of doctorate recipients from U.S. institutions maintained by NAS/NRC; National Science Foundation's (NSF) National Register of Scientific and Technical Personnel, which from 1954 through 1970 collected information on highly qualified personnel in science fields; *American Men and Women of Science,* and several other sources including university and college catalogs of doctorate-granting institutions, Federal laboratories, and selected industrial organizations. The population consists of individuals who earned doctorates within the 42-year period 1934-76. Included in this population are individuals who earned a doctorate at U.S. institutions in the natural or social sciences, mathematics, and engineering, as well as individuals who received research doctorates in non-S/E fields but were known to be employed as scientists or engineers. In addition, the population included individuals who had earned their doctorates at foreign institutions and were known to be working in the United States as scientists or engineers.

The 1977 Survey of Doctoral Scientists and Engineers was the third in a biennial series. The first, conducted in 1973, took account of individuals who had received their doctorates between 1930 and 1972. Subsequent surveys continued to account for a 42-year period by adding the two most recent graduating year cohorts and eliminating the two oldest. The resulting population is slightly larger than that estimated by NAS/NRC based on this survey[1] because the NSF estimates include non-S/E doctorate-holders employed as scientists or engineers. The numerical differences and a comparison of NSF and NAS/NRC field classifications are outlined in table A-1.

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[1] National Academy of Sciences, *Science, Engineering, and Humanities Docotorates in the United States: 1977 Profile* (Washington, D.C.), 1978.

Table A—1. Number of doctoral scientists and engineers in the U.S. by NSF and NAS/NRC field classification: 1977

Field	NSF		NAS/NRC			
			Field of doctorate		Field of employment	
	Number	Percent	Number	Percent	Number	Percent
Total	303,267	100.0	295,827	100.0	276,910	100.0
Physical scientists	62,055	20.5	([1])	([1])	([1])	([1])
Chemists	40,650	13.4	44,616	15.1	33,236	12.0
Physicists/astronomers	21,405	7.1	26,425	8.9	17,911	6.5
Mathematical scientists	15,406	5.1	15,848	5.4	13,130	4.7
Mathematicians	13,665	4.5	([1])	([1])	([1])	([1])
Statisticians	1,741	.6	([1])	([1])	([1])	([1])
Computer specialists	5,822	1.9	1,516	.5	5,514	2.0
Environmental scientists	13,543	4.5	9,578	3.2	12,511	4.5
Earth scientists	10,235	3.4	([1])	([1])	([1])	([1])
Oceanographer	1,592	.5	([1])	([1])	([1])	([1])
Atmospheric scientists	1,716	.6	([1])	([1])	([1])	([1])
Engineers	46,539	15.3	44,329	15.0	42,309	15.3
Life scientists	78,335	25.8	([1])	([1])	([1])	([1])
Biological scientists	46,788	15.4	53,548	18.1	39,251	14.2
Agricultural scientists	15,062	5.0	13,612	4.6	13,534	4.9
Medical scientists	16,485	5.4	8,147	2.8	14,785	5.3
Psychologists	35,718	11.8	34,177	11.6	28,555	10.3
Social scientists	45,849	15.1	44,031	14.9	32,973	11.9
Economists	11,689	3.9	([1])	([1])	([1])	([1])
Sociologists/anthropologists	10,352	3.4	([1])	([1])	([1])	([1])
Other social scientists	23,808	7.9	([1])	([1])	([1])	([1])
Nonscience/engineering	([1])	([1])	([1])	([1])	17,165	6.2
No report	([1])	([1])	([1])	([1])	6,036	2.2

[1] Not applicable to field definition.

NOTE: Percents may not add to 100 because of rounding.

SOURCE: National Science Foundation and National Academy of Science/National Research Council.

Survey Procedures

A sample of approximately 65,000 scientists and engineers was selected for the 1977 survey.[2] In selecting this sample individuals in the file were stratified according to (1) category within the 1977 roster (U.S. S/E doctorate-holders, foreign doctorate-holders, and non-S/E doctorate-holders); (2) sex; (3) field of doctorate; (4) year of doctorate; and (5) racial/ethnic identification.[3]

Category within the roster — Since the roster is compiled from several sources, it was necessary to treat those individuals who received their degrees from U.S. institutions, those who held doctorates from foreign institutions, and those who held non-S/E-doctorates, as separate segments for sampling purposes.

Sex — The number of women doctorate-holders in science and engineering is significantly smaller than the number of men. This characteristic, therefore, was used to define a stratum to ensure that women were adequately represented in the sample selected.

Field of doctorate — The major subject of an individual's doctorate represents the field of doctorate.

Year of the doctorate — Various classes of graduates were grouped according to year of degree to form cohorts. Since the earlier classes had fewer graduates, a larger number of years were grouped to form cohorts. As the size of classes increased in later years, the number of classes included in a cohort was decreased.

Racial/ethnic identification — This stratum was selected to ensure that racial/ethnic minorities would be adequately sampled. Racial/ethnic data were available beginning with the 1973 cohort.

Sampling and mailing — To ensure representation of small groups within the population, variable sampling ratios were used. Adequate representation of small cells within the stratification tables (N ≦ 15) necessitated the inclusion of all available cases in those cells, whereas larger cells did not need to be so heavily sampled to yield reliable statistics. Accordingly, as cell size increased, an increasing number, but decreasing percent of cases was included in the sample.[4]

Initial mailing of the questionnaire took place in March 1977; followup mailing to those who had not yet responded was conducted in April 1977. Results of the 1977 survey include all data received through November 1977.

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[2] The 1977 survey sample was expanded to include doctorate-holding humanists in the United States.

[3] This stratum was first introduced for the 1975 survey when "size of doctoral institution" was omitted.

[4] Table A-2 provides information on sample sizes and sampling frames by particular characteristics.

Response Rates

From the survey sample drawn, approximately 3,400 individuals were known to be deceased, or otherwise outside the scope of the survey; resulting in an active sample of 65,108 individuals was used. The number of individuals assumed to have been contacted was 60,487. A total of 41,193 survey responses was received. The survey yielded an overall response rate of 63.3 percent of the active sample and 68.1 percent of those contacted (table A-2).

Since the various cells in the sample were not equally represented, it was necessary to assign differential weights to generate estimates of the total population; i.e., each response was weighted so that the statistics represent, as nearly as possible, the results which would have been obtained if the entire population had been surveyed.[5]

Definitions

A copy of the questionnaire and accompanying material are included in appendix C. The following definitions are provided to permit effective use of the data presented in the report.

Field of science or engineering — Derived from responses to question 10 which requested the name and code number of the specialty most closely related to the respondent's principal employment selected from the Degree and Employment Specialties List included with the questionnaire. The grouping of specialties to form fields was accomplished by using the scheme presented in table A-3. Individuals failing to respond to question 10 were assigned the specialty of their doctoral degree listed in item 6.

This field definition, which is used in all of the statistical tables presented in this report, differs from the field definition used by the Commission on Human Resources in reporting the results of this survey.[6] Care should be exercised, therefore, in comparing data from these sources.

Table A—2. Stratification, sample, and survey responses of doctoral scientists and engineers: 1977 survey

Stratification category	Sampling frame[1]	Active sample[2]	Sample contacted[3]	Survey responses	Response rates[4]	
					A	B
Total	328,351	65,108	60,487	41,193	63.3%	68.1%
Segment:						
U.S. S/E	307,945	57,769	54,094	36,940	63.9	68.3
U.S. non-S/E	8,289	2,538	2,403	1,713	67.5	71.3
Foreign	12,117	4,801	3,990	2,540	52.9	63.7
Sex:						
Men	294,647	51,460	47,966	32,589	63.3	67.9
Women	33,704	13,648	12,521	8,604	63.0	68.7
Field of doctorate:						
Mathematics	19,384	4,776	4,472	2,873	60.2	64.2
Physics/astronomy	28,861	5,795	5,395	3,609	62.3	66.9
Chemistry	48,260	8,766	8,213	5,736	65.3	69.8
Earth sciences	10,004	2,095	1,954	1,457	69.5	74.6
Engineering	47,590	7,506	6,779	4,429	59.0	65.3
Biosciences	82,080	19,359	18,062	12,707	65.6	70.4
Psychology	40,601	7,772	7,375	4,994	64.3	67.7
Social sciences	50,822	8,653	7,927	5,187	59.9	65.4
Nonscience/unknown	969	366	310	201	54.9	64.8
Year of Ph.D.:						
CY 1934-35	3,647	682	620	435	63.8	70.2
CY 1936-41	12,286	2,256	2,064	1,469	65.1	71.2
CY 1942-45	6,567	1,548	1,434	1,022	66.0	71.3
CY 1946-49	10,122	2,059	1,907	1,361	66.1	71.4
CY 1950-53	21,910	3,864	3,601	2,557	66.2	71.0
CY 1954-57	25,047	4,421	4,199	2,975	67.3	70.9
CY 1958-FY 1961	24,762	5,055	4,795	3,275	64.8	68.3
FY 1962-63	16,850	4,219	3,984	2,682	63.6	67.3
FY 1964-65	21,182	4,847	4,504	3,044	62.8	67.6
FY 1966-67	26,010	5,582	5,147	3,455	61.9	67.1
FY 1968-69	31,755	6,262	5,804	3,879	61.9	66.8
FY 1970-71	36,794	6,760	6,304	4,224	62.5	67.0
FY 1972	18,414	3,475	3,219	2,220	63.9	69.0
FY 1973	16,505	3,526	3,225	2,036	57.8	63.2
FY 1974	16,014	3,436	3,117	2,013	58.6	64.6
FY 1975	18,004	3,413	3,160	2,147	62.9	67.9
FY 1976	17,690	3,405	3,184	2,305	67.7	72.4
Unknown	772	298	219	92	30.9	42.0
Racial/ethnic identification:						
Pre-1973[5]	256,178	51,364	47,831	32,707	63.7	68.4
White	54,366	7,030	6,756	5,116	72.8	75.7
Oriental	5,659	2,259	2,028	1,095	48.5	54.0
Other minorities	2,112	1,509	1,404	852	56.5	60.7
Unknown	10,036	2,946	2,468	1,423	48.3	57.7

[1] Includes those deceased and those residing in foreign countries.

[2] Excludes those deceased or determined to be out of scope prior to the 1977 survey.

[3] Consists of individuals for whom valid addresses were assumed to have been obtained.

[4] Response rate A is the number of survey responses divided by the number in the active sample; response rate B is the number of responses divided by the number assumed to have been contacted.

[5] Racial/ethnic data not available prior to FY 1973.

SOURCE: National Academy of Sciences/National Research Council.

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[5] Weights were assigned as a function of the sampling rates and the response rates. The sample weights (Ws) and response rates (W_r) for each stratum were computed as follows:

$Ws_h = \frac{N_h}{n_h}$, where N_h and n_h are the respective population and sample sizes of the stratum (h).

$Wr_h = \frac{N_h}{n_h} \cdot \frac{\hat{n}_h}{r_h}$, where $\hat{n}_h$ is the number of survey samples cases in the stratum and r_h is the number of survey responses in that stratum.

[6] See supra, table A-1 and p.14.

Table A—3. Science and engineering field classification of specialties: 1977 Doctoral Survey

Field	Specialty Code	Field	Specialty Code
All S/E fields	000 to 799	Engineers	400 to 499
		Life scientists	500 to 579
Physical scientists	101 to 299	Biological scientists	540 to 579
Chemists	200 to 299	Agricultural scientists	500 to 519
Physicists and astronomers	101 to 199	Medical scientists	520 to 539
Mathematical scientists	000 to 099	Psychologists	600 to 699
Mathematicians	0000 to 052 060 to 099	Social scientists	700 to 799
Statisticians	055	Economists	720, 725
Computer specialists	071 to 079	Sociologists/anthropologists	700, 710
Environmental scientists	301 to 399	Other social scientists	703, 708, 709, 729 to 799
Earth scientists	301 to 360, 388 to 395, 398, 399	Non-S/E fields	801 to 899
Oceanographers	370, 397		
Atmospheric scientists	381 to 383		

Type of employer — Derived from question 8. The category "educational institution" includes junior colleges, 2-year colleges, technical institutes, medical schools, 4-year colleges or universities, and elementary or secondary school systems. Private foundations, museums or historical societies, and research libraries or archives are included with nonprofit organizations.

Geographic location — Derived from responses to question 11 on the location of employment. Individuals not reporting place of employment or not employed were classified by their mailing address.

University or 4-year college teachers — Defined as those individuals who reported "4-year college" or "university, other than medical school" as their principal employer under question 8 and also reported "teaching" as their primary or secondary work activity under question 9.

Primary work activity — Derived from responses to question 9. The term "development" encompasses the development of equipment, products, systems or data. "Sales/professional services" includes sales, marketing, purchasing, estimating, and professional services to individuals, but excludes consulting which is treated as a separate work activity. The work activities listed under question 9 as "writing, editing, production, quality control, inspection, and testing," have been aggregated with "other" to form a single category.

Salaries — Derived from responses to question 12 which requested information regarding annual salary before deductions for income tax, social security, retirement, etc., but excluding bonuses, overtime, summer teaching or other payment for professional work. Salaries reported are median annual salaries, rounded to the nearest $100 and computed for full-time employed civilian scientists and engineers only. Differences between calendar-year (11 to 12 months) and academic-year (9 to 10 months) salaries for scientists and engineers employed in educational institutions have been accommodated by multiplying academic year salaries by eleven-ninths to adjust to a calendar-year scale.[7]

Topics of critical national interest — Derived from question 15. Responses to the category "cultural life" have been combined with "Other" to form a single category.

Data Revisions

The 1973 and 1975 numerical data presented in this report differ somewhat from estimates previously published for those years. These revisions, made to ensure the comparability of 1977 data with previous estimates, are based on (1) modification to the 1973 and 1975 sampling frames and (2) refinements in coding procedures.

Sampling frame — Re-examination of the 1973 and 1975 sampling frames resulted in the deletion of some individuals who were foreign citizens and who had left this country following the receipt of a Ph.D. from a U.S. institution.[8] The overall effect of these deletions was a decrease in the size of the estimates for 1973 and 1975. The extent to which these revisions have affected the population, labor force, and the total employed estimates are presented below:

	1973		*1975*		*Percent Change*	
Selected Estimates	*Published*	*Revised*	*Published*	*Revised*	*1973*	*1975*
Population	244,921	238,913	277,517	270,480	—2.5	—2.5
Labor force	229,392	222,924	264,944	258,515	—2.8	—2.4
Total employed	226,750	220,410	262,411	256,048	—2.8	—2.4

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[7] Except for table B-20 where salary base period is included as a variable.

[8] Data on citizenship and postdoctoral plans were collected by the Survey of Earned Doctorates beginning in 1958.

Coding refinements — Beginning in 1975, certain coding refinements were implemented which resulted in improved estimates of the number and characteristics of the industrially employed, the distribution of individuals by primary work activity, and the distribution of individuals by racial origin. These refinements were made possible principally through the introduction of manual coding techniques which permitted resolution of ambiguous or null responses to a selected questionnaire item by referring to other item responses, previous survey responses, and external data resources. As a result, the number of cases in the "no report" category was reduced significantly, thereby permitting the assignment of individuals to more appropriate response categories.

In order to allow a more meaningful assessment of the changes in characteristics of doctoral scientists and engineers throughout the survey series, these refined coding procedures were applied to the 1973 data relating to the parameters cited above. This has resulted in a sharp reduction in the number of cases in the "no report" category and a more meaningful distribution of response categories (table A-4).

Data revisions attributable to these factors have had little effect on median annual salaries. An analysis of salaries of the total employed group and those individuals employed by educational institutions and by business and industry indicates the changes in salary to be more than $300 per year in only 11 percent of the cases examined.

Sampling Errors

The statistics presented in this report are subject to error resulting from sampling. Although the data are based on a survey conducted in terms of a stratified sample, sampling errors presented below have been calculated assuming simple random sampling techniques. Comparisons between sampling errors computed on this basis and those which take stratification into account are presented in a recent NAS/NRC report[*] based on the 1977 survey. In that analysis it was determined that, for most variables, the differences between the two errors are small; thus, a useful approximation of the sampling error appropriate to the proportions of the variable-designated categories appearing in this report is provided by the following formula:

$$\sqrt{\frac{N-n}{N-1}} \cdot \sqrt{\frac{p(1-p)}{n}}$$

where N = population estimate
n = sample size
p = proportion possessing attribute

Table A—4. Revisions to selected 1973 estimates resulting from sampling frame modifications and coding refinements

Selected characteristics	1973		Percent Change
	Published	Revised	
TOTAL	244,921	238,913	—2.5
Race:			
White	212,686	216,867	2.0
Black	1,860	2,188	17.6
American Indian	106	375	253.8
Asian	11,001	9,449	—14.1
No report	19,268	10,034	—47.9
TOTAL EMPLOYED	226,750	220,410	—2.8
Sector of Employment:			
Business/industry	50,022	53,403	6.8
Other employers	173,192	166,721	—3.7
No report	3,536	286	—91.9
Primary Work Activity:			
Research and development	69,509	71,460	2.8
Basic research	32,275	34,258	6.1
Applied research	28,654	28,700	.2
Development	8,580	8,502	—.9
Management or administration	40,408	46,172	14.3
Of R&D	22,529	26,223	16.4
Other than R&D	12,097	13,258	9.6
Of both	5,782	6,691	15.7
Teaching	81,728	80,012	—2.1
Consulting	4,014	4,055	1.0
Sales/professional services	8,242	8,064	—2.2
Other	6,939	6,959	.3
No report	15,910	3,688	—76.8

Since the finite population correction factor $[(N-n)/(N-1)]^{1/2}$ is expected to have a negligible effect on most statistics presented in this document, it has been omitted in the calculation of sampling errors. The sampling errors reported in the following tables, which reflect a 90-percent confidence interval, were computed on the basis of the approximation discussed above. They should, therefore, be considered estimates rather than precise measurements of these sampling errors.

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[*] National Academy of Sciences, op. cit.

Sampling errors at the 90-percent level of confidence for doctoral scientists and engineers: 1977

Total Population

Size of estimate	Estimated sampling error	Base of percent	Estimated percent					
			1/99	2/98	5/95	10/30	25/75	50
100	50	500	2.0	2.9	4.5	6.1	8.8	10.2
200	60	1,000	1.4	2.0	3.1	4.3	6.3	7.2
500	100	2,000	1.0	1.4	2.2	3.1	4.4	5.1
1,000	140	5,000	.6	.9	1.4	1.9	2.8	3.2
2,000	200	10,000	.4	.6	1.0	1.4	2.0	2.3
5,000	320	15,000	.4	.5	.8	1.1	1.6	1.9
10,000	450	20,000	.3	.4	.7	1.0	1.4	1.6
15,000	550	30,000	.3	.4	.6	.8	1.1	1.3
20,000	620	40,000	.2	.3	.5	.7	1.0	1.1
30,000	750	50,000	.2	.3	.4	.6	.9	1.0
40,000	850	75,000	.2	.2	.4	.5	.7	.8
50,000	930	100,000	.1	.2	.3	.4	.6	.7
75,000	1,090	150,000	.1	.2	.3	.4	.5	.6
100,000	1,180	200,000	.1	.1	.2	.3	.4	.5
150,000	1,260	250,000	.1	.1	.2	.3	.4	.5
200,000	1,190	275,000	.1	.1	.2	.3	.4	.4
250,000	960	300,000	.1	.1	.2	.2	.4	.4
275,000	730							

Employed in educational institutions

Size of estimate	Estimated sampling error	Base of percent	Estimated percent					
			1/99	2/98	5/95	10/90	25/75	50
100	40	500	2.0	2.8	4.4	6.0	8.7	10.0
200	60	1,000	1.4	2.0	3.1	4.3	6.1	7.1
500	100	2,000	1.0	1.4	2.2	3.0	4.3	5.0
1,000	140	5,000	.6	.9	1.4	1.9	2.8	3.2
2,000	200	10,000	.4	.6	1.0	1.4	1.9	2.2
5,000	310	15,000	.4	.5	.8	1.1	1.6	1.8
10,000	430	20,000	.3	.4	.7	1.0	1.4	1.6
15,000	520	30,000	.3	.4	.6	.8	1.1	1.3
20,000	590	40,000	.2	.3	.5	.7	1.0	1.1
30,000	700	50,000	.2	.3	.4	.6	.9	1.0
40,000	780	75,000	.2	.2	.4	.5	.7	.8
50,000	840	100,000	.1	.2	.3	.4	.6	.7
75,000	900	125,000	.1	.2	.3	.4	.6	.6
100,000	880	160,000	.1	.2	.2	.3	.5	.6
125,000	770							
150,000	490							

Employed in business and industry

Size of estimate	Estimated sampling error	Base of percent	Estimated percent					
			1/99	2/98	5/95	10/90	25/75	50
100	50	500	2.2	3.1	4.8	6.5	9.4	10.9
200	70	1,000	1.5	2.2	3.4	4.6	6.7	7.7
500	110	2,000	1.1	1.5	2.4	3.3	4.7	5.5
1,000	150	5,000	.7	1.0	1.5	2.1	3.0	3.4
2,000	220	10,000	.5	.7	1.1	1.5	2.1	2.4
5,000	330	15,000	.4	.6	.9	1.2	1.7	2.0
10,000	450	20,000	.3	.5	.8	1.0	1.5	1.7
15,000	530	30,000	.3	.4	.6	.8	1.2	1.4
20,000	590	40,000	.2	.3	.5	.7	1.1	1.2
30,000	640	50,000	.2	.3	.5	.6	.9	1.1
40,000	650	60,000	.2	.3	.4	.6	.9	1.0
50,000	600	70,000	.2	.3	.4	.6	.8	.9
60,000	480							

Employed by the Federal Government

Size of estimate	Estimated sampling error	Base of percent	Estimated percent					
			1/99	2/98	5/95	10/90	25/75	50
100	50	500	2.1	3.0	4.6	6.3	9.1	10.6
200	70	1,000	1.5	2.1	3.3	4.5	6.5	7.5
500	100	2,000	1.1	1.5	2.3	3.2	4.6	5.3
1,000	150	5,000	.7	.9	1.5	2.0	2.9	3.3
2,000	200	10,000	.5	.7	1.0	1.4	2.0	2.4
5,000	290	15,000	.4	.5	.8	1.2	1.7	1.9
10,000	340	20,000	.3	.5	.7	1.0	1.4	1.7
15,000	320							

Sampling errors — Con.

Employed women

Size of estimate	Estimated sampling error	Base of percent	Estimated percent					
			1/99	2/98	5/95	10/90	25/75	50
100	30	500	1.4	2.0	3.2	4.3	6.2	7.2
200	50	1,000	1.0	1.4	2.2	3.1	4.4	5.1
500	70	2,000	.7	1.0	1.6	2.2	3.1	3.6
1,000	100	5,000	.4	.6	1.0	1.4	2.0	2.3
2,000	140	10,000	.3	.4	.7	.9	1.4	1.6
5,000	210	15,000	.3	.4	.6	.8	1.1	1.3
10,000	260	20,000	.2	.3	.5	.7	1.0	1.1
15,000	270	25,000	.2	.3	.4	.6	.9	1.0
20,000	240							

Employed by field

Field	Size of estimate													
	100	200	500	1,000	2,000	5,000	10,000	15,000	20,000	30,000	40,000	50,000	60,000	70,000
Physical scientists	50	70	100	150	200	310	420	490	530	550	510	370		
Chemists	50	70	100	140	200	300	390	440	440	350				
Physicists/astronomers	50	70	100	140	200	290	330	290	50					
Mathematical scientists	40	60	90	130	180	240	240							
Mathematicians	40	60	90	130	170	240	200							
Statisticians	40	60	80	90										
Computer specialists	50	70	100	140	170	120								
Environmental scientists	40	60	100	140	190	250	220							
Earth scientists	40	60	100	140	180	220								
Oceanographers	40	60	80	90										
Atmospheric scientists	40	60	80	90										
Engineers	50	70	120	160	230	350	460	520	550	520	350			
Life scientists	40	60	90	130	180	290	390	460	500	550	560	520	420	180
Biological scientists	40	60	90	130	180	270	380	400	420	380	180			
Agricultural scientists	50	70	110	150	200	280	270							
Medical scientists	40	60	90	120	170	230	240	90						
Psychologists	50	60	100	140	200	300	390	420	420	270				
Social scientists	50	70	110	160	220	330	430	490	510	470	250			
Economists	50	70	120	160	210	270	140							
Sociologists/anthropologists	50	70	100	140	190	230								
Other social scientists	50	70	110	150	210	310	370	350	230					

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TABLE B-1. CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS IN THE UNITED STATES: 1977

CHARACTERISTICS	NUMBER	PERCENT
TOTAL	303,267	100.0
FIELD		
PHYSICAL SCIENTISTS	62,055	20.5
CHEMISTS	40,650	13.4
PHYSICISTS/ASTRONOMERS	21,405	7.1
MATHEMATICAL SCIENTISTS	15,406	5.1
MATHEMATICIANS	13,665	4.5
STATISTICIANS	1,741	0.6
COMPUTER SPECIALISTS	5,822	1.9
ENVIRONMENTAL SCIENTISTS	13,543	4.5
EARTH SCIENTISTS	10,235	3.4
OCEANOGRAPHERS	1,592	0.5
ATMOSPHERIC SCIENTISTS	1,716	0.6
ENGINEERS	46,539	15.3
LIFE SCIENTISTS	78,335	25.8
BIOLOGICAL SCIENTISTS	46,788	15.4
AGRICULTURAL SCIENTISTS	15,062	5.0
MEDICAL SCIENTISTS	16,485	5.4
PSYCHOLOGISTS	35,718	11.8
SOCIAL SCIENTISTS	45,849	15.1
ECONOMISTS	11,689	3.9
SOCIOLOGISTS/ANTHRO	10,352	3.4
OTHER SOCIAL SCIENTISTS	23,808	7.9
SEX		
MEN	271,594	89.6
WOMEN	31,673	10.4
CITIZENSHIP		
USA	285,452	94.1
FOREIGN	17,255	5.7
NO REPORT	560	0.2
RACE		
WHITE	270,305	89.1
BLACK	2,846	0.9
AM. INDIAN/ALSKN NATIVE	630	0.2
ASIAN/PACIFIC ISLANDER	15,703	5.2
NO REPORT	13,783	4.5
AGE (MEDIAN AGE 41)		
24 OR UNDER	2	*
25-29	8,861	2.9
30-34	55,461	18.3
35-39	68,762	22.7
40-44	46,284	15.3
45-49	38,671	12.8
50-54	31,953	10.5
55-59	23,816	7.9
60-64	14,838	4.9
65-69	8,721	2.9
70 OR OVER	5,408	1.8
NO REPORT	490	0.2
EMPLOYMENT STATUS		
FULL-TIME EMPLOYED	266,998	88.0
SCIENCE/ENGINEERING	245,208	80.9
OTHER/UNKNOWN FIELD	21,790	7.2
PART-TIME EMPLOYED	7,484	2.5
SCIENCE/ENGINEERING	6,349	2.1
OTHER/UNKNOWN FIELD	1,135	0.4
POSTDOCTORATE	9,755	3.2
NOT EMPLOYED/SEEKING	3,312	1.1
NOT EMPLOYED/NOT SEEKING	2,830	0.9
RETIRED	9,748	3.2
OTHER	540	0.2
NO REPORT	2,600	0.9

CHARACTERISTICS	NUMBER	PERCENT
TYPE OF EMPLOYER		
BUSINESS/INDUSTRY	71,464	23.6
EDUCATIONAL INSTITUTIONS	163,101	53.8
4-YEAR COLLEGES/UNIV	156,452	51.6
2-YEAR COLLEGES	4,634	1.5
ELEMENTARY/SEC.SCHOOLS	2,015	0.7
HOSPITALS/CLINICS	8,587	2.8
NONPROFIT ORGANIZATIONS	10,188	3.4
FEDERAL GOVERNMENT	21,353	7.0
MILITARY/COMM. CORPS	2,282	0.8
STATE GOVERNMENT	3,783	1.2
OTHER GOVERNMENT	1,545	0.5
OTHER	584	0.2
NOT EMPLOYED	19,030	6.3
NO REPORT	1,350	0.4
PRIMARY WORK ACTIVITY		
RESEARCH AND DEVELOPMENT	93,460	30.8
BASIC RESEARCH	43,545	14.4
APPLIED RESEARCH	36,413	12.0
DEVELOPMENT	13,502	4.5
MANAGEMENT/ADMINISTRATION	60,464	19.9
OF R&D	30,733	10.1
OF OTHER THAN R&D	22,150	7.3
OF BOTH	7,581	2.5
TEACHING	90,392	29.8
CONSULTING	6,141	2.0
SALES/PROF. SERVICES	15,183	5.0
OTHER	12,785	4.2
NOT EMPLOYED	19,030	6.3
NO REPORT	5,812	1.9
YEARS OF PROF. EXPERIENCE		
1 OR LESS YEARS	5,981	2.0
2-4 YEARS	35,455	11.7
5-9 YEARS	70,133	23.1
10-14 YEARS	54,660	18.0
15-19 YEARS	38,076	12.6
20-24 YEARS	32,860	10.8
25-29 YEARS	27,343	9.0
30-34 YEARS	14,873	4.9
35-39 YEARS	10,908	3.6
40 OR MORE YEARS	7,333	2.4
NO REPORT	5,645	1.9
FEDERAL SUPPORT		
RECEIVING SUPPORT	119,627	39.4
NO SUPPORT	152,662	50.3
STATUS UNKNOWN	7,483	2.5
NOT EMPLOYED	19,030	6.3
NO REPORT	4,465	1.5
AREA OF NATIONAL INTEREST		
EDUCATION	56,822	18.7
HEALTH	52,838	17.4
DEFENSE	15,417	5.1
ENVIRONMENTAL/POLLUTION	17,578	5.8
SPACE	4,182	1.4
CRIME PREVENTION/CONTROL	3,261	1.1
FOOD/OTHER AGR. PRODUCTS	16,825	5.5
ENERGY AND FUEL	28,557	9.4
OTHER NATURAL RESOURCES	6,757	2.2
COMMUNITY DEV./SERVICES	6,982	2.3
HOUSING	1,017	0.3
TRANSP/COMMUNICATIONS	5,553	1.8
OTHER	12,248	4.0
DOES NOT APPLY	31,538	10.4
NOT EMPLOYED	19,030	6.3
NO REPORT	24,662	8.1

* LESS THAN 0.1 PERCENT
NOTE: PERCENTS MAY NOT ADD TO 100 BECAUSE OF ROUNDING
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-2. SALARY DISTRIBUTION OF DOCTORAL SCIENTISTS AND ENGINEERS, BY FIELD: 1977

FIELD	LOWER DECILE	LOWER QUARTILE	MEDIAN	UPPER QUARTILE	UPPER DECILE
TOTAL	$17,600	$20,800	$25,600	$31,600	$39,100
PHYSICAL SCIENTISTS.......	18,200	21,700	26,600	32,600	39,600
CHEMISTS..................	18,300	21,800	26,600	32,900	40,400
PHYSICISTS/ASTRONOMERS...	18,000	21,600	26,500	32,000	37,900
MATHEMATICAL SCIENTISTS...	16,600	19,000	23,300	28,900	35,300
MATHEMATICIANS............	16,300	18,800	23,100	28,500	35,200
STATISTICIANS.............	17,700	20,700	25,100	30,800	35,600
COMPUTER SPECIALISTS......	17,300	20,500	25,800	31,400	37,900
ENVIRONMENTAL SCIENTISTS..	18,000	21,100	25,800	32,300	39,400
EARTH SCIENTISTS..........	18,000	21,100	25,900	32,400	39,600
OCEANOGRAPHERS............	17,400	20,200	24,100	29,700	37,000
ATMOSPHERIC SCIENTISTS...	18,800	22,000	28,300	32,900	39,400
ENGINEERS.................	20,700	24,400	28,600	34,200	40,500
LIFE SCIENTISTS...........	17,300	20,300	24,700	30,700	38,500
BIOLOGICAL SCIENTISTS....	16,900	19,800	23,800	29,500	36,200
AGRICULTURAL SCIENTISTS..	18,100	20,800	24,800	30,200	36,400
MEDICAL SCIENTISTS.......	17,800	21,900	28,000	35,700	45,200
PSYCHOLOGISTS.............	17,000	19,400	24,100	30,400	37,700
SOCIAL SCIENTISTS.........	16,800	19,400	24,100	30,300	37,500
ECONOMISTS................	19,100	22,400	27,000	34,200	43,100
SOCIOLOGISTS/ANTHRO......	16,000	18,400	22,200	27,500	34,600
OTHER SOCIAL SCIENTISTS..	16,200	18,900	23,200	29,400	36,300

NOTE: MEDIAN SALARIES COMPUTED ONLY FOR FULL-TIME EMPLOYED CIVILIANS
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-3. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND CITIZENSHIP: 1977

FIELD	TOTAL	USA	NON-USA	NO REPORT
TOTAL....................	303,267	285,452	17,255	560
PHYSICAL SCIENTISTS.......	62,055	57,823	4,186	46
CHEMISTS..................	40,650	38,100	2,517	33
PHYSICISTS/ASTRONOMERS...	21,405	19,723	1,669	13
MATHEMATICAL SCIENTISTS...	15,406	14,418	935	53
MATHEMATICIANS............	13,665	12,826	786	53
STATISTICIANS.............	1,741	1,592	149	*
COMPUTER SPECIALISTS......	5,822	5,166	656	*
ENVIRONMENTAL SCIENTISTS..	13,543	12,727	816	*
EARTH SCIENTISTS..........	10,235	9,667	568	*
OCEANOGRAPHERS............	1,592	1,518	74	*
ATMOSPHERIC SCIENTISTS...	1,716	1,542	174	*
ENGINEERS.................	46,539	42,400	4,089	50
LIFE SCIENTISTS...........	78,335	73,903	4,300	132
BIOLOGICAL SCIENTISTS....	46,788	44,042	2,656	90
AGRICULTURAL SCIENTISTS..	15,062	14,440	604	18
MEDICAL SCIENTISTS.......	16,485	15,421	1,040	24
PSYCHOLOGISTS.............	35,718	35,242	418	58
SOCIAL SCIENTISTS.........	45,849	43,773	1,855	221
ECONOMISTS................	11,689	10,889	743	57
SOCIOLOGISTS/ANTHRO......	10,352	10,031	275	46
OTHER SOCIAL SCIENTISTS..	23,808	22,853	837	118

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 8-4. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX, RACE, AND EMPLOYMENT STATUS: 1977

FIELD, SEX, AND RACE	TOTAL	EMPLOYED FULL-TIME			EMPLOYED PART-TIME			POST-DOC-TORAL	UNEMP/ SEEKING EMP.	UNEMP/ NOT SEEKING EMP.	RE-TIRED	OTHER	NO REPORT
		TOTAL	SCI/ ENG.	OTHER/ UNKNOWN FIELD	TOTAL	SCI/ ENG.	OTHER/ UNKNOWN FIELD						
ALL FIELDS													
TOTAL....................	303,267	266,998	245,208	21,790	7,484	6,349	1,135	9,755	3,312	2,830	9,748	540	2,600
SEX													
MEN..................	271,594	244,918	225,272	19,646	4,079	3,357	722	7,738	2,334	1,337	8,417	430	2,341
WOMEN................	31,673	22,080	19,936	2,144	3,405	2,992	413	2,017	978	1,493	1,331	110	259
RACE													
WHITE................	270,305	238,410	218,990	19,420	6,813	5,781	1,032	8,086	2,845	2,543	8,844	518	2,246
BLACK................	2,846	2,563	2,195	368	77	59	18	104	18	26	25	4	29
AM.INDIAN/ALSKN NATIVE	630	574	536	38	9	7	2	14	22	1	*	*	10
ASIAN/PACIFIC ISLANDER	15,703	13,755	12,898	857	192	177	15	1,295	236	121	48	2	54
NO REPORT............	13,783	11,696	10,589	1,107	393	325	68	256	191	139	831	16	261
PHYSICAL SCIENTISTS													
TOTAL....................	62,055	53,943	48,120	5,823	930	717	213	2,577	761	588	2,634	70	552
SEX													
MEN..................	58,523	51,657	46,129	5,528	623	475	148	2,262	596	338	2,456	61	530
WOMEN................	3,532	2,286	1,991	295	307	242	65	315	165	250	178	9	22
RACE													
WHITE................	55,319	48,348	43,114	5,234	864	665	199	2,042	620	497	2,406	65	477
BLACK................	598	563	460	103	3	3	*	18	2	12	*	*	*
AM.INDIAN/ALSKN NATIVE	74	62	52	10	*	*	*	2	10	*	*	*	*
ASIAN/PACIFIC ISLANDER	3,377	2,742	2,554	188	34	31	3	447	73	47	16	2	16
NO REPORT............	2,687	2,228	1,940	288	29	18	11	68	56	32	212	3	59
CHEMISTS													
TOTAL....................	40,650	35,187	31,394	3,793	571	452	119	1,556	482	423	1,977	55	399
SEX													
MEN..................	37,779	33,328	29,785	3,543	343	276	67	1,289	354	202	1,833	48	382
WOMEN................	2,871	1,859	1,609	250	228	176	52	267	128	221	144	7	17
RACE													
WHITE................	36,413	31,751	28,324	3,427	524	413	111	1,213	367	350	1,807	50	351
BLACK................	446	420	331	89	*	*	*	14	2	10	*	*	*
AM.INDIAN/ALSKN NATIVE	41	29	29	*	*	*	*	2	10	*	*	*	*
ASIAN/PACIFIC ISLANDER	2,169	1,714	1,613	101	27	24	3	305	50	46	16	2	9
NO REPORT............	1,581	1,273	1,097	176	20	15	5	22	53	17	154	3	39
PHYSICISTS/ASTRONOMERS													
TOTAL....................	21,405	18,756	16,726	2,030	359	265	94	1,021	279	165	657	15	153
SEX													
MEN..................	20,744	18,329	16,344	1,985	280	199	81	973	242	136	623	13	148
WOMEN................	661	427	382	45	79	66	13	48	37	29	34	2	5
RACE													
WHITE................	18,906	16,597	14,790	1,807	340	252	88	829	253	147	599	15	126
BLACK................	152	143	129	14	3	3	*	4	*	2	*	*	*
AM.INDIAN/ALSKN NATIVE	33	33	23	10	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	1,208	1,028	941	87	7	7	*	142	23	1	*	*	7
NO REPORT............	1,106	955	843	112	9	3	6	46	3	15	58	*	20
MATHEMATICAL SCIENTISTS													
TOTAL....................	15,406	14,123	13,184	939	372	322	50	78	176	101	426	22	108
SEX													
MEN..................	14,197	13,211	12,337	874	245	204	41	69	142	64	350	14	102
WOMEN................	1,209	912	847	65	127	118	9	9	34	37	76	8	6
RACE													
WHITE................	13,628	12,535	11,706	829	317	267	50	69	148	93	358	22	86
BLACK................	130	123	96	27	*	*	*	*	*	*	7	*	*
AM.INDIAN/ALSKN NATIVE	38	38	28	10	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	733	672	638	34	35	35	*	7	8	8	3	*	*
NO REPORT............	877	755	716	39	20	20	*	2	20	*	58	*	22
MATHEMATICIANS													
TOTAL....................	13,665	12,449	11,551	898	333	283	50	78	172	99	404	22	108
SEX													
MEN..................	12,574	11,628	10,795	833	229	188	41	69	140	64	328	14	102
WOMEN................	1,091	821	756	65	104	95	9	9	32	35	76	8	6
RACE													
WHITE................	12,036	10,996	10,208	788	290	240	50	69	146	91	336	22	86
BLACK................	119	112	85	27	*	*	*	*	*	*	7	*	*
AM.INDIAN/ALSKN NATIVE	25	25	15	10	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	634	587	553	34	23	23	*	7	6	8	3	*	*
NO REPORT............	851	729	690	39	20	20	*	2	20	*	58	*	22
STATISTICIANS													
TOTAL....................	1,741	1,674	1,633	41	39	39	*	*	4	2	22	*	*
SEX													
MEN..................	1,623	1,583	1,542	41	16	16	*	*	2	*	22	*	*
WOMEN................	118	91	91	*	23	23	*	*	2	2	*	*	*
RACE													
WHITE................	1,592	1,539	1,498	41	27	27	*	*	2	2	22	*	*
BLACK................	11	11	11	*	*	*	*	*	*	*	*	*	*
AM.INDIAN/ALSKN NATIVE	13	13	13	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	99	85	85	*	12	12	*	*	2	*	*	*	*
NO REPORT............	26	26	26	*	*	*	*	*	*	*	*	*	*
COMPUTER SPECIALISTS													
TOTAL....................	5,822	5,681	5,601	80	43	43	*	43	*	13	*	17	25
SEX													
MEN..................	5,586	5,461	5,383	78	30	30	*	43	*	13	*	14	25
WOMEN................	236	220	218	2	13	13	*	*	*	*	*	3	*
RACE													
WHITE................	4,995	4,879	4,808	71	36	36	*	38	*	13	*	17	12
BLACK................	15	15	15	*	*	*	*	*	*	*	*	*	*
AM.INDIAN/ALSKN NATIVE	2	2	2	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	581	576	576	*	*	*	*	5	*	*	*	*	*
NO REPORT............	229	209	200	9	7	7	*	*	*	*	*	*	13
ENVIRONMENTAL SCIENTISTS													
TOTAL....................	13,543	12,386	11,952	434	283	264	19	357	96	18	330	28	45
SEX													
MEN..................	13,053	12,044	11,616	428	219	202	17	324	80	*	313	28	45
WOMEN................	490	342	336	6	64	62	2	33	16	18	17	*	*
RACE													
WHITE................	12,537	11,481	11,083	398	253	234	19	316	87	18	309	28	45
BLACK................	24	24	24	*	*	*	*	*	*	*	*	*	*
AM.INDIAN/ALSKN NATIVE	8	6	6	*	*	*	*	2	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	518	470	447	23	12	12	*	29	7	*	*	*	*
NO REPORT............	456	405	392	13	18	18	*	10	2	*	21	*	*

* NO CASES REPORTED

TABLE B-4. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX, RACE, AND EMPLOYMENT STATUS: 1977
CONTINUED

FIELD, SEX, AND RACE	TOTAL	EMPLOYED FULL-TIME			EMPLOYED PART-TIME			POST- DOC- TORAL	UNEMP/ SEEKING EMP.	UNEMP/ NOT SEEKING EMP.	RE- TIRED	OTHER	NO REPORT
		TOTAL	SCI/ ENG.	OTHER/ UNKNOWN FIELD	TOTAL	SCI/ ENG.	OTHER/ UNKNOWN FIELD						
EARTH SCIENTISTS													
TOTAL......................	10,235	9,316	8,917	399	203	184	19	246	78	15	327	10	40
SEX													
MEN....................	9,898	9,096	8,703	393	154	137	17	222	65	*	311	10	40
WOMEN..................	337	220	214	6	49	47	2	24	13	15	16	*	*
RACE													
WHITE..................	9,567	8,707	8,331	376	194	175	19	220	75	15	306	10	40
BLACK..................	19	19	19	*	*	*	*	*	*	*	*	*	*
AM.INDIAN/ALSKN NATIVE	6	6	6	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	342	316	302	14	1	1	*	22	3	*	*	*	*
NO REPORT............	301	268	259	9	8	8	*	4	*	*	21	*	*
OCEANOGRAPHERS													
TOTAL......................	1,592	1,487	1,461	26	43	43	*	33	18	3	3	*	5
SEX													
MEN....................	1,510	1,423	1,397	26	35	35	*	30	15	*	2	*	5
WOMEN..................	82	64	64	*	8	8	*	3	3	3	1	*	*
RACE													
WHITE..................	1,462	1,381	1,359	22	33	33	*	25	12	3	3	*	5
BLACK..................	*	*	*	*	*	*	*	*	*	*	*	*	*
AM.INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	62	56	56	*	*	*	*	2	4	*	*	*	*
NO REPORT............	68	50	46	4	10	10	*	6	2	*	*	*	*
ATMOSPHERIC SCIENTISTS													
TOTAL......................	1,716	1,583	1,574	9	37	37	*	78	*	*	*	18	*
SEX													
MEN....................	1,645	1,525	1,516	9	30	30	*	72	*	*	*	18	*
WOMEN..................	71	58	58	*	7	7	*	6	*	*	*	*	*
RACE													
WHITE..................	1,508	1,393	1,393	*	26	26	*	71	*	*	*	18	*
BLACK..................	5	5	5	*	*	*	*	*	*	*	*	*	*
AM.INDIAN/ALSKN NATIVE	2	*	*	*	*	*	*	2	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	114	98	89	9	11	11	*	5	*	*	*	*	*
NO REPORT............	87	87	87	*	*	*	*	*	*	*	*	*	*
ENGINEERS													
TOTAL......................	46,539	44,035	41,483	2,552	609	567	42	402	264	182	644	66	337
SEX													
MEN....................	46,220	43,788	41,240	2,548	588	546	42	387	257	167	636	65	332
WOMEN..................	319	247	243	4	21	21	*	15	7	15	8	1	5
RACE													
WHITE..................	39,640	37,528	35,301	2,227	563	523	40	240	220	169	571	66	283
BLACK..................	134	129	116	13	*	*	*	5	*	*	*	*	*
AM.INDIAN/ALSKN NATIVE	51	51	51	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	4,902	4,651	4,444	207	28	26	2	143	35	13	7	*	25
NO REPORT............	1,812	1,676	1,571	105	18	18	*	14	9	*	66	*	29
LIFE SCIENTISTS													
TOTAL......................	78,335	64,971	61,449	3,522	1,716	1,482	234	5,237	991	1,302	3,248	187	683
SEX													
MEN....................	67,576	58,161	55,108	3,053	872	709	163	3,908	663	531	2,698	143	600
WOMEN..................	10,759	6,810	6,341	469	844	773	71	1,329	328	771	550	44	83
RACE													
WHITE..................	70,176	58,432	55,264	3,168	1,588	1,375	213	4,395	861	1,152	2,930	177	641
BLACK..................	828	714	659	55	11	11	*	70	9	14	6	4	*
AM.INDIAN/ALSKN NATIVE	147	132	129	3	2	*	2	10	2	1	*	*	*
ASIAN/PACIFIC ISLANDER	3,853	3,013	2,871	142	48	38	10	647	78	53	3	*	11
NO REPORT............	3,331	2,680	2,526	154	67	58	9	115	41	82	309	6	31
BIOLOGICAL SCIENTISTS													
TOTAL......................	46,788	37,010	34,509	2,501	1,086	919	167	4,065	841	834	2,457	115	380
SEX													
MEN....................	38,531	32,087	30,003	2,084	485	368	117	2,905	536	179	1,948	78	313
WOMEN..................	8,257	4,923	4,506	417	601	551	50	1,160	305	655	509	37	67
RACE													
WHITE..................	41,790	33,190	30,924	2,266	1,011	859	152	3,440	719	737	2,225	111	357
BLACK..................	531	462	415	47	*	*	*	41	9	9	6	4	*
AM.INDIAN/ALSKN NATIVE	70	58	55	3	2	*	2	7	2	1	*	*	*
ASIAN/PACIFIC ISLANDER	2,350	1,704	1,625	79	38	34	4	488	76	33	*	*	11
NO REPORT............	2,047	1,596	1,490	106	35	26	9	89	35	54	226	*	12
AGRICULTURAL SCIENTISTS													
TOTAL......................	15,062	13,933	13,336	597	185	143	42	175	68	57	540	20	84
SEX													
MEN....................	14,769	13,731	13,144	587	145	111	34	153	61	37	538	20	84
WOMEN..................	293	202	192	10	40	32	8	22	7	20	2	*	*
RACE													
WHITE..................	13,748	12,782	12,273	509	174	132	42	101	68	42	477	20	84
BLACK..................	83	71	71	*	6	6	*	6	*	*	*	*	*
AM.INDIAN/ALSKN NATIVE	49	49	49	*	*	*	*	*	*	15	*	*	*
ASIAN/PACIFIC ISLANDER	569	486	433	53	*	*	*	68	*	*	63	*	*
NO REPORT............	613	545	510	35	5	5	*	*	*	*	*	*	*
MEDICAL SCIENTISTS													
TOTAL......................	16,485	14,028	13,604	424	445	420	25	997	82	411	251	52	219
SEX													
MEN....................	14,276	12,343	11,961	382	242	230	12	850	66	315	212	45	203
WOMEN..................	2,209	1,685	1,643	42	203	190	13	147	16	96	39	7	16
RACE													
WHITE..................	14,638	12,460	12,067	393	403	384	19	854	74	373	228	46	200
BLACK..................	214	181	173	8	5	5	*	23	*	5	*	*	*
AM.INDIAN/ALSKN NATIVE	28	25	25	*	*	*	*	3	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	934	823	813	10	10	4	6	91	2	5	3	*	*
NO REPORT............	671	539	526	13	27	27	*	26	6	28	20	6	19
PSYCHOLOGISTS.............													
TOTAL......................	35,718	31,012	28,810	2,202	2,151	1,976	175	561	420	343	791	58	382
SEX													
MEN....................	27,236	24,989	23,266	1,723	704	669	35	386	223	98	507	37	292
WOMEN..................	8,482	6,023	5,544	479	1,447	1,307	140	175	197	245	284	21	90
RACE													
WHITE..................	32,842	28,482	26,518	1,964	1,988	1,825	163	538	384	326	737	53	334
BLACK..................	466	430	363	67	21	18	3	9	6	*	*	*	*
AM.INDIAN/ALSKN NATIVE	146	139	136	3	7	7	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	303	286	277	9	3	3	*	9	5	*	*	*	*
NO REPORT............	1,961	1,675	1,516	159	132	123	9	5	25	17	54	5	48

* NO CASES REPORTED

TABLE B-4. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX, RACE, AND EMPLOYMENT STATUS: 1977
CONTINUED

FIELD, SEX, AND RACE	TOTAL	EMPLOYED FULL-TIME			EMPLOYED PART-TIME			POST-DOC-TORAL	UNEMP/ SEEKING EMP.	UNEMP/ NOT SEEKING EMP.	RE-TIRED	OTHER	NO REPORT
		TOTAL	SCI/ ENG.	OTHER/ UNKNOWN FIELD	TOTAL	SCI/ ENG.	OTHER/ UNKNOWN FIELD						
SOCIAL SCIENTISTS													
TOTAL......................	45,849	40,847	34,609	6,238	1,380	978	402	500	604	283	1,675	92	468
SEX													
MEN....................	39,203	35,607	30,193	5,414	798	522	276	359	373	126	1,457	68	415
WOMEN..................	6,646	5,240	4,416	824	582	456	126	141	231	157	218	24	53
RACE													
WHITE..................	41,168	36,725	31,196	5,529	1,204	856	348	448	525	275	1,533	90	368
BLACK..................	651	565	462	103	42	27	15	2	1	*	12	*	29
AM.INDIAN/ALSKN NATIVE	164	144	132	12	*	*	*	*	10	*	*	*	10
ASIAN/PACIFIC ISLANDER	1,436	1,345	1,091	254	32	32	*	8	30	*	19	*	2
NO REPORT.............	2,430	2,068	1,728	340	102	63	39	42	38	8	111	2	59
ECONOMISTS													
TOTAL......................	11,689	10,549	8,648	1,901	173	144	29	68	54	19	625	23	178
SEX													
MEN....................	10,804	9,821	8,010	1,811	125	103	22	56	52	*	557	23	170
WOMEN..................	885	728	638	90	48	41	7	12	2	19	68	*	8
RACE													
WHITE..................	10,436	9,433	7,702	1,731	170	141	29	55	49	17	536	23	153
BLACK..................	112	88	64	24	*	*	*	*	*	*	12	*	12
AM.INDIAN/ALSKN NATIVE	40	40	40	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER	524	499	436	63	3	3	*	5	5	*	12	*	*
NO REPORT.............	577	489	406	83	*	*	*	8	*	2	65	*	13
SOCIOLOGISTS/ANTHRO.													
TOTAL......................	10,352	8,906	8,161	745	416	310	106	171	261	62	370	47	119
SEX													
MEN....................	7,785	6,888	6,357	531	200	141	59	119	133	19	299	34	93
WOMEN..................	2,567	2,018	1,804	214	216	169	47	52	128	43	71	13	26
RACE													
WHITE..................	9,323	8,006	7,354	652	360	264	96	165	232	62	370	45	83
BLACK..................	152	124	98	26	15	15	*	2	*	*	*	*	11
AM.INDIAN/ALSKN NATIVE	56	40	40	*	*	*	*	*	4	*	*	*	10
ASIAN/PACIFIC ISLANDER	284	275	260	15	6	6	*	*	3	*	*	*	*
NO REPORT.............	539	461	409	52	35	25	10	4	22	*	*	2	15
OTHER SOCIAL SCIENTISTS													
TOTAL......................	23,808	21,392	17,800	3,592	791	524	267	261	289	202	680	22	171
SEX													
MEN....................	20,614	18,898	15,826	3,072	473	278	195	184	188	107	601	11	152
WOMEN..................	3,194	2,494	1,974	520	318	246	72	77	101	95	79	11	19
RACE													
WHITE..................	21,409	19,286	16,140	3,146	674	451	223	228	244	196	627	22	132
BLACK..................	387	353	300	53	27	12	15	*	1	*	*	*	6
AM.INDIAN/ALSKN NATIVE	70	64	52	12	*	*	*	*	6	*	*	*	*
ASIAN/PACIFIC ISLANDER	628	571	395	176	23	23	*	3	22	*	7	*	2
NO REPORT.............	1,314	1,118	913	205	67	38	29	30	16	6	46	*	31

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-5. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AGE, AND TYPE OF EMPLOYER: 1977

FIELD AND AGE	TOTAL	BUSINESS/INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/UNIV.	2-YEAR COLL.	ELEM/SEC. SCHOOL									
ALL FIELDS															
TOTAL	303,267	71,464	163,101	156,452	4,634	2,015	8,587	10,188	21,353	2,282	3,783	1,545	584	19,030	1,350
24 OR UNDER	2	*	2	2	*	*	*	*	*	*	*	*	*	*	*
25-29	8,861	1,760	5,421	5,269	61	91	302	358	308	103	112	69	*	389	39
30-34	55,461	13,632	30,126	28,980	894	252	2,322	2,024	3,693	489	791	279	117	1,899	89
35-39	68,762	18,193	37,225	35,515	1,295	415	1,870	2,478	4,747	670	867	296	188	2,021	207
40-44	46,284	11,399	25,832	24,829	690	313	1,162	1,431	3,766	512	585	224	86	1,137	150
45-49	38,671	8,993	22,178	21,359	546	273	906	1,193	3,210	235	539	156	85	1,045	131
50-54	31,953	7,316	17,901	17,115	486	300	968	1,145	2,640	171	400	207	30	1,018	157
55-59	23,816	5,570	13,112	12,473	390	249	590	815	1,707	64	239	134	27	1,309	249
60-64	14,838	3,128	7,697	7,419	196	82	337	378	907	29	180	93	40	1,894	155
65-69	8,721	981	2,942	2,868	52	22	87	260	322	6	58	57	5	3,929	74
70 OR OVER	5,408	413	479	449	24	6	36	84	41	3	12	30	6	4,226	78
NO REPORT	490	79	186	174	*	12	7	22	12	*	*	*	*	163	21
PHYSICAL SCIENTISTS															
TOTAL	62,055	22,980	27,081	25,544	1,297	240	542	2,031	3,941	275	213	63	28	4,605	296
24 OR UNDER	2	*	2	2	*	*	*	*	*	*	*	*	*	*	*
25-29	2,029	687	1,073	1,069	4	*	13	89	67	2	*	*	*	78	20
30-34	10,721	3,902	5,030	4,696	315	19	137	460	742	91	27	12	*	300	20
35-39	13,779	5,224	6,408	5,868	437	103	93	480	904	125	53	13	15	436	28
40-44	9,572	3,626	4,405	4,209	168	28	107	366	707	23	65	*	8	211	54
45-49	7,976	3,225	3,795	3,621	152	22	22	194	462	*	44	14	*	190	30
50-54	6,477	2,677	2,669	2,486	157	26	114	191	492	22	24	*	*	275	13
55-59	4,827	2,038	1,878	1,807	35	36	39	162	280	*	*	16	5	358	51
60-64	3,389	1,268	1,262	1,232	24	6	10	41	225	12	*	5	*	531	35
65-69	2,042	257	459	458	1	*	7	41	62	*	*	3	*	1,190	23
70 OR OVER	1,154	38	76	72	4	*	*	1	*	*	*	*	*	1,017	22
NO REPORT	87	38	24	24	*	*	*	6	*	*	*	*	*	19	*
CHEMISTS															
TOTAL	40,650	18,664	14,792	13,698	893	201	446	1,048	1,810	118	184	48	14	3,336	190
24 OR UNDER	2	*	2	2	*	*	*	*	*	*	*	*	*	*	*
25-29	1,486	560	767	767	*	*	13	30	38	2	*	*	*	60	16
30-34	6,796	3,082	2,755	2,510	226	19	121	177	339	59	23	5	*	217	18
35-39	8,321	4,027	3,334	2,974	268	92	58	154	345	26	53	13	6	287	18
40-44	6,042	2,953	2,260	2,144	95	21	93	213	289	7	40	*	8	136	43
45-49	5,279	2,704	2,060	1,923	120	17	22	123	183	*	44	14	*	129	*
50-54	4,117	2,168	1,237	1,101	122	14	91	176	226	12	24	*	*	170	13
55-59	3,614	1,794	1,143	1,076	35	32	31	115	196	*	*	16	*	297	22
60-64	2,640	1,112	870	841	23	6	10	20	149	12	*	*	*	446	21
65-69	1,558	208	302	302	*	*	7	34	45	*	*	*	*	939	23
70 OR OVER	728	28	38	34	4	*	*	*	*	*	*	*	*	646	16
NO REPORT	67	28	24	24	*	*	*	6	*	*	*	*	*	9	*
PHYSICISTS/ASTRONOMERS															
TOTAL	21,405	4,316	12,289	11,846	404	39	96	983	2,131	157	29	15	14	1,269	106
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	543	127	306	302	4	*	*	59	29	*	*	*	*	18	4
30-34	3,925	820	2,275	2,186	89	*	16	283	403	32	4	7	*	83	2
35-39	5,458	1,197	3,074	2,894	169	11	35	326	559	99	*	*	9	149	10
40-44	3,530	673	2,145	2,065	73	7	14	153	418	16	25	*	*	75	11
45-49	2,697	521	1,735	1,698	32	5	*	71	279	*	*	*	*	61	30
50-54	2,360	509	1,432	1,385	35	12	23	15	266	10	*	*	*	105	*
55-59	1,213	244	735	731	*	4	8	47	84	*	*	*	5	61	29
60-64	749	156	392	391	1	*	*	21	76	*	*	5	*	85	14
65-69	484	49	157	156	1	*	*	7	17	*	*	3	*	251	*
70 OR OVER	426	10	38	38	*	*	*	1	*	*	*	*	*	371	6
NO REPORT	20	10	*	*	*	*	*	*	*	*	*	*	*	10	*
MATHEMATICAL SCIENTISTS															
TOTAL	15,406	1,282	12,228	11,774	360	94	*	261	593	50	23	28	11	833	97
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	678	76	563	528	18	17	*	4	2	9	*	*	*	24	*
30-34	3,275	270	2,626	2,465	153	8	*	76	203	*	*	*	*	88	12
35-39	4,215	383	3,391	3,264	90	37	*	54	176	41	11	4	11	122	22
40-44	2,278	174	1,900	1,828	46	26	*	42	66	*	9	10	*	76	1
45-49	1,735	149	1,492	1,475	15	2	*	14	50	*	*	*	*	30	*
50-54	1,175	110	962	940	20	2	*	37	34	*	3	*	*	18	11
55-59	764	44	618	603	13	2	*	17	19	*	*	12	*	44	10
60-64	617	73	428	423	5	*	*	17	38	*	*	2	*	40	19
65-69	405	3	195	195	*	*	*	*	5	*	*	*	*	187	15
70 OR OVER	258	*	49	49	*	*	*	*	*	*	*	*	*	202	7
NO REPORT	6	*	4	4	*	*	*	*	*	*	*	*	*	2	*
MATHEMATICIANS															
TOTAL	13,665	996	11,018	10,566	358	94	*	221	438	50	12	28	*	805	97
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	609	72	498	463	18	17	*	4	2	9	*	*	*	24	*
30-34	2,916	198	2,392	2,231	153	8	*	64	162	*	*	*	*	88	12
35-39	3,687	277	3,061	2,936	88	37	*	44	118	41	*	4	*	120	22
40-44	2,026	116	1,734	1,662	46	26	*	33	49	*	9	10	*	74	1
45-49	1,534	133	1,323	1,306	15	2	*	14	36	*	*	*	*	28	*
50-54	1,081	88	902	880	20	2	*	35	24	*	3	*	*	18	11
55-59	668	44	522	507	13	2	*	17	19	*	*	12	*	44	10
60-64	519	65	369	364	5	*	*	10	23	*	*	2	*	31	19
65-69	388	3	185	185	*	*	*	*	5	*	*	*	*	180	15
70 OR OVER	231	*	28	28	*	*	*	*	*	*	*	*	*	196	7
NO REPORT	6	*	4	4	*	*	*	*	*	*	*	*	*	2	*
STATISTICIANS															
TOTAL	1,741	286	1,210	1,208	2	*	*	40	155	*	11	*	11	28	*
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	69	4	65	65	*	*	*	*	*	*	*	*	*	*	*
30-34	359	72	234	234	*	*	*	12	41	*	*	*	*	*	*
35-39	528	106	330	328	2	*	*	10	58	*	11	*	11	2	*
40-44	252	58	166	166	*	*	*	9	17	*	*	*	*	2	*
45-49	201	16	169	169	*	*	*	*	14	*	*	*	*	2	*
50-54	94	22	60	60	*	*	*	2	10	*	*	*	*	*	*
55-59	96	*	96	96	*	*	*	*	*	*	*	*	*	*	*
60-64	98	8	59	59	*	*	*	7	15	*	*	*	*	9	*
65-69	17	*	10	10	*	*	*	*	*	*	*	*	*	7	*
70 OR OVER	27	*	21	21	*	*	*	*	*	*	*	*	*	6	*
NO REPORT	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* NO CASES REPORTED

TABLE B-5. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AGE, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND AGE	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
COMPUTER SPECIALISTS															
TOTAL	5,822	3,058	2,128	2,118	10	*	12	159	251	78	69	12	*	55	*
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	256	117	98	98	*	*	*	27	*	14	*	*	*	*	*
30-34	1,724	986	569	562	7	*	10	67	58	*	18	*	*	16	*
35-39	1,538	861	543	543	*	*	*	34	45	33	14	4	*	4	*
40-44	899	452	331	331	*	*	*	12	71	11	9	*	*	13	*
45-49	675	298	259	259	*	*	*	19	45	17	15	8	*	14	*
50-54	406	163	202	202	*	*	2	*	26	*	13	*	*	*	*
55-59	220	130	82	82	*	*	*	*	*	*	*	*	*	8	*
60-64	90	51	33	30	3	*	*	*	6	*	*	*	*	*	*
65-69	11	*	11	11	*	*	*	*	*	*	*	*	*	*	*
70 OR OVER	3	*	*	*	*	*	*	*	*	3	*	*	*	*	*
NO REPORT	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ENVIRONMENTAL SCIENTISTS															
TOTAL	13,543	3,103	6,312	6,147	125	40	*	520	2,415	108	424	82	14	517	48
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	268	80	94	94	*	*	*	14	66	14	*	*	*	*	*
30-34	2,416	702	1,172	1,142	12	18	*	56	266	10	106	48	*	56	*
35-39	3,171	774	1,545	1,520	25	*	*	134	545	41	84	*	*	39	9
40-44	2,301	475	1,040	1,002	26	12	*	88	532	19	99	*	6	42	*
45-49	1,826	321	958	919	30	9	*	93	331	*	65	34	*	24	*
50-54	1,348	285	666	660	5	1	*	27	277	24	49	*	2	10	8
55-59	1,091	287	491	465	26	*	*	41	227	*	13	*	*	17	15
60-64	557	131	215	214	1	*	*	30	130	*	6	*	*	45	*
65-69	356	35	108	108	*	*	*	36	41	*	2	*	*	124	10
70 OR OVER	208	13	23	23	*	*	*	1	*	*	*	*	6	159	6
NO REPORT	1	*	*	*	*	*	*	*	*	*	*	*	*	1	*
EARTH SCIENTISTS															
TOTAL	10,235	2,700	4,641	4,507	112	22	*	296	1,634	25	331	82	8	470	48
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	175	52	79	79	*	*	*	14	30	*	*	*	*	*	*
30-34	1,666	609	747	735	12	*	*	9	156	*	66	48	*	31	*
35-39	2,268	675	1,063	1,038	25	*	*	89	361	4	46	*	*	21	9
40-44	1,792	419	821	784	25	12	*	44	365	9	86	*	6	42	*
45-49	1,436	260	777	750	18	9	*	52	224	*	65	34	*	24	*
50-54	1,056	276	522	516	5	1	*	6	174	12	47	*	2	9	8
55-59	848	265	342	316	26	*	*	19	179	*	13	*	*	15	15
60-64	465	96	180	179	1	*	*	30	108	*	6	*	*	45	*
65-69	338	35	98	98	*	*	*	32	37	*	2	*	*	124	10
70 OR OVER	190	13	12	12	*	*	*	1	*	*	*	*	*	158	6
NO REPORT	1	*	*	*	*	*	*	*	*	*	*	*	*	1	*
OCEANOGRAPHERS															
TOTAL	1,592	135	971	940	13	18	*	56	287	45	63	*	6	29	*
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	51	26	9	9	*	*	*	*	16	*	*	*	*	*	*
30-34	375	27	240	222	*	18	*	28	40	10	23	*	*	7	*
35-39	486	30	312	312	*	*	*	6	70	23	27	*	*	18	*
40-44	231	5	145	144	1	*	*	2	66	*	13	*	*	*	*
45-49	200	28	104	92	12	*	*	*	68	*	*	*	*	*	*
50-54	112	*	83	83	*	*	*	4	12	12	*	*	*	1	*
55-59	68	*	49	49	*	*	*	12	5	*	*	*	*	2	*
60-64	46	19	19	19	*	*	*	*	8	*	*	*	*	*	*
65-69	16	*	10	10	*	*	*	4	2	*	*	*	*	*	*
70 OR OVER	7	*	*	*	*	*	*	*	*	*	*	*	6	1	*
NO REPORT	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ATMOSPHERIC SCIENTISTS															
TOTAL	1,716	268	700	700	*	*	*	168	494	38	30	*	*	18	*
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	42	2	6	6	*	*	*	*	20	14	*	*	*	*	*
30-34	375	66	185	185	*	*	*	19	70	*	17	*	*	18	*
35-39	417	69	170	170	*	*	*	39	114	14	11	*	*	*	*
40-44	278	51	74	74	*	*	*	42	101	10	*	*	*	*	*
45-49	190	33	77	77	*	*	*	41	39	*	*	*	*	*	*
50-54	180	9	61	61	*	*	*	17	91	*	2	*	*	*	*
55-59	175	22	100	100	*	*	*	10	43	*	*	*	*	*	*
60-64	46	16	16	16	*	*	*	*	14	*	*	*	*	*	*
65-69	2	*	*	*	*	*	*	*	2	*	*	*	*	*	*
70 OR OVER	11	*	11	11	*	*	*	*	*	*	*	*	*	*	*
NO REPORT	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ENGINEERS															
TOTAL	46,539	22,870	15,911	15,709	185	17	21	1,551	3,519	686	270	114	23	1,493	81
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	809	462	277	277	*	*	*	27	*	36	1	6	*	*	*
30-34	7,766	4,576	1,999	1,996	3	*	6	217	679	66	42	25	*	156	*
35-39	12,372	6,656	3,797	3,699	81	17	*	506	918	152	90	25	*	202	26
40-44	8,789	4,000	3,236	3,205	31	*	7	260	770	316	40	17	*	127	16
45-49	6,105	2,734	2,455	2,454	1	*	6	167	528	78	42	11	23	61	*
50-54	4,553	1,931	1,863	1,843	20	*	2	197	333	38	21	22	*	113	33
55-59	3,433	1,455	1,475	1,459	16	*	*	154	168	*	10	8	*	163	*
60-64	1,491	707	554	544	10	*	*	8	83	*	24	*	*	115	*
65-69	800	239	230	207	23	*	*	3	30	*	*	*	*	298	*
70 OR OVER	358	89	25	25	*	*	*	*	*	*	*	*	*	238	6
NO REPORT	63	21	*	*	*	*	*	12	10	*	*	*	*	20	*
LIFE SCIENTISTS															
TOTAL	78,335	10,064	47,471	46,267	1,074	130	2,539	2,442	6,760	739	1,155	306	63	6,411	385
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	2,348	136	1,663	1,638	25	*	40	131	103	27	5	11	*	228	4
30-34	14,723	1,801	9,462	9,237	215	10	686	577	968	230	195	3	22	750	29
35-39	16,821	2,513	10,494	10,185	261	48	619	497	1,314	190	305	75	14	710	90
40-44	10,865	1,564	6,903	6,722	165	16	339	311	1,133	88	144	56	6	306	15
45-49	9,880	1,158	6,240	6,054	168	18	270	296	1,263	84	156	28	*	320	65
50-54	8,647	1,199	5,346	5,274	64	8	282	256	946	55	129	25	13	347	49
55-59	6,290	856	3,865	3,756	93	16	145	177	638	42	135	36	3	331	62
60-64	4,336	512	2,441	2,373	66	2	107	113	280	17	58	58	*	718	32
65-69	2,590	183	888	865	17	6	25	58	89	6	16	5	5	1,300	15
70 OR OVER	1,732	130	132	126	*	6	19	26	26	*	12	9	*	1,354	24
NO REPORT	103	12	37	37	*	*	*	*	*	*	*	*	*	47	*

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* NO CASES REPORTED

TABLE B-5. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AGE, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND AGE	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
BIOLOGICAL SCIENTISTS															
TOTAL	46,788	4,011	30,829	29,849	852	128	1,124	1,686	3,367	334	446	89	3	4,627	272
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	1,554	76	1,174	1,171	3	*	15	122	43	21	*	5	*	98	*
30-34	9,446	790	6,709	6,513	186	10	276	418	532	122	92	3	*	483	21
35-39	10,580	1,045	7,178	6,902	228	48	317	361	779	79	137	28	*	586	70
40-44	6,071	543	4,332	4,171	145	16	136	213	505	33	81	18	*	203	7
45-49	5,464	382	3,864	3,737	109	18	147	211	548	31	12	5	*	217	47
50-54	5,013	555	3,332	3,269	57	6	109	163	465	21	59	12	*	260	37
55-59	3,287	348	2,134	2,053	65	16	43	106	299	16	47	3	3	254	34
60-64	2,402	191	1,427	1,377	48	2	46	41	155	11	18	6	*	481	26
65-69	1,719	58	579	562	11	6	15	36	33	*	*	5	*	978	15
70 OR OVER	1,192	23	82	76	*	6	13	15	8	*	*	4	*	1,032	15
NO REPORT	60	*	18	18	*	*	7	*	*	*	*	*	*	35	*
AGRICULTURAL SCIENTISTS															
TOTAL	15,062	2,858	8,331	8,175	154	2	11	185	2,496	*	310	20	54	769	28
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	257	47	164	142	22	*	*	*	41	*	5	*	*	*	*
30-34	2,063	523	1,054	1,031	23	*	*	12	341	*	62	*	22	49	*
35-39	2,863	750	1,580	1,569	11	*	11	32	384	*	83	*	14	9	*
40-44	2,338	541	1,278	1,258	20	*	*	14	452	*	21	12	*	20	*
45-49	2,266	319	1,206	1,170	36	*	*	36	578	*	61	*	*	55	11
50-54	1,704	218	1,070	1,068	*	2	*	6	343	*	40	2	13	12	*
55-59	1,800	231	1,156	1,132	24	*	*	41	260	*	32	*	*	43	17
60-64	986	132	589	577	12	*	*	44	71	*	6	6	*	138	*
65-69	466	28	203	197	6	*	*	*	20	*	*	*	5	210	*
70 OR OVER	294	43	18	18	*	*	*	*	6	*	*	*	*	227	*
NO REPORT	25	6	13	13	*	*	*	*	*	*	*	*	*	6	*
MEDICAL SCIENTISTS															
TOTAL	16,485	3,195	8,311	8,243	68	*	1,404	571	897	405	399	197	6	1,015	85
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	537	13	325	325	*	*	25	9	19	6	*	6	*	130	4
30-34	3,214	488	1,699	1,693	6	*	410	147	95	108	41	*	*	218	8
35-39	3,378	718	1,736	1,714	22	*	291	104	151	111	85	47	*	115	20
40-44	2,456	480	1,293	1,293	*	*	203	84	176	55	42	26	6	83	8
45-49	2,150	457	1,170	1,147	23	*	123	49	137	53	83	23	*	48	7
50-54	1,930	426	944	937	7	*	173	87	138	34	30	11	*	75	12
55-59	1,203	257	575	571	4	*	102	30	79	26	56	33	*	34	11
60-64	948	189	425	419	6	*	61	28	54	6	34	46	*	99	6
65-69	405	97	106	106	*	*	10	22	36	6	16	*	*	112	*
70 OR OVER	246	64	32	32	*	*	6	11	12	*	12	5	*	95	9
NO REPORT	18	6	6	6	*	*	*	*	*	*	*	*	*	6	*
PSYCHOLOGISTS															
TOTAL	35,718	5,525	18,572	16,632	675	1,265	5,386	1,262	1,231	190	828	515	41	1,994	174
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	1,442	93	916	853	2	61	222	35	28	1	79	33	*	20	15
30-34	7,107	934	3,709	3,435	102	172	1,467	174	221	57	155	110	30	249	1
35-39	6,972	977	3,868	3,501	193	174	1,138	281	201	48	145	68	*	216	30
40-44	5,014	816	2,709	2,446	79	184	700	163	143	39	121	83	11	212	17
45-49	4,739	868	2,479	2,226	66	187	598	208	226	2	144	47	*	152	15
50-54	4,315	722	2,297	1,945	105	247	568	172	220	32	100	87	*	91	26
55-59	2,981	557	1,486	1,266	58	162	406	101	139	11	27	48	*	173	33
60-64	1,644	268	797	684	57	56	220	70	31	*	30	9	*	193	26
65-69	876	189	246	225	5	16	55	39	22	*	27	23	*	275	*
70 OR OVER	577	93	43	35	8	*	12	17	*	*	*	7	*	405	*
NO REPORT	51	8	22	16	*	6	*	2	*	*	*	*	*	8	11
SOCIAL SCIENTISTS															
TOTAL	45,849	2,582	33,398	32,261	908	229	87	1,962	2,643	156	801	425	404	3,122	269
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	1,031	109	737	712	12	13	27	31	42	*	27	19	*	39	*
30-34	7,729	461	5,559	5,447	87	25	16	397	556	35	248	81	65	284	27
35-39	9,894	805	7,179	6,935	208	36	20	492	644	40	165	107	148	292	2
40-44	6,566	292	5,308	5,086	175	47	9	189	344	16	98	58	55	150	47
45-49	5,735	240	4,500	4,351	114	35	10	202	305	54	73	14	62	254	21
50-54	5,032	229	3,896	3,765	115	16	*	265	312	*	61	73	15	164	17
55-59	4,210	203	3,217	3,035	149	33	*	163	236	11	54	14	19	215	78
60-64	2,714	118	1,967	1,919	30	18	*	99	114	*	62	19	40	252	43
65-69	1,641	75	805	799	6	*	*	83	73	*	13	26	*	555	11
70 OR OVER	1,118	50	131	119	12	*	5	39	15	*	*	14	*	851	13
NO REPORT	179	*	99	93	*	6	*	2	2	*	*	*	*	66	10
ECONOMISTS															
TOTAL	11,689	1,385	7,496	7,423	73	*	*	427	950	24	101	22	296	899	89
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	322	35	231	231	*	*	*	*	29	*	27	*	*	*	*
30-34	1,930	271	1,206	1,206	*	*	*	98	267	*	20	*	42	26	*
35-39	2,638	450	1,606	1,592	14	*	*	118	261	*	*	3	109	91	*
40-44	1,381	127	1,027	1,027	*	*	*	26	105	10	*	12	39	22	13
45-49	1,370	107	1,011	998	13	*	*	34	101	14	*	*	54	49	*
50-54	1,246	113	941	939	2	*	*	61	75	*	14	5	11	15	11
55-59	1,000	129	631	613	18	*	*	58	55	*	16	*	14	58	39
60-64	874	76	617	603	14	*	*	30	42	*	24	2	27	54	2
65-69	417	51	167	167	*	*	*	2	13	*	*	*	*	173	11
70 OR OVER	452	26	57	45	12	*	*	*	*	*	*	*	*	356	13
NO REPORT	59	*	2	2	*	*	*	*	2	*	*	*	*	55	*
SOCIOLOGISTS/ANTHRO.															
TOTAL	10,352	193	8,547	8,293	232	22	14	422	132	*	103	44	*	859	38
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	236	*	201	189	12	*	*	14	*	*	*	*	*	21	*
30-34	1,709	23	1,417	1,396	21	*	*	59	48	*	49	*	*	113	*
35-39	2,110	72	1,865	1,807	58	*	*	68	24	*	6	3	*	72	*
40-44	1,482	13	1,310	1,244	60	6	9	45	*	*	16	13	*	54	22
45-49	1,298	20	1,090	1,060	19	11	*	36	12	*	21	6	*	113	*
50-54	1,255	18	1,051	1,012	39	*	*	116	20	*	*	*	*	44	6
55-59	977	9	875	852	18	5	*	11	8	*	*	14	*	60	*
60-64	574	13	485	480	5	*	*	30	14	*	9	*	*	23	*
65-69	409	12	188	188	*	*	*	22	6	*	2	*	*	179	*
70 OR OVER	263	13	36	36	*	*	5	21	*	*	*	8	*	180	*
NO REPORT	39	*	29	29	*	*	*	*	*	*	*	*	*	*	10

* NO CASES REPORTED

TABLE B-5. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AGE, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND AGE	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL	HOSPITAL/ CLINIC	NON-PROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
OTHER SOCIAL SCIENTISTS															
TOTAL......................	23,808	1,004	17,355	16,545	603	207	73	1,113	1,561	132	597	359	108	1,364	142
24 OR UNDER...........	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29.................	473	74	305	292	*	13	27	17	13	*	*	19	*	18	*
30-34.................	4,090	167	2,936	2,845	66	25	16	240	241	35	179	81	23	145	27
35-39.................	5,146	283	3,708	3,536	136	36	20	306	359	40	159	101	39	129	2
40-44.................	3,703	152	2,971	2,815	115	41	*	118	239	6	82	33	16	74	12
45-49.................	3,067	113	2,399	2,293	82	24	10	132	192	40	52	8	8	92	21
50-54.................	2,531	98	1,904	1,814	74	16	*	88	217	*	47	68	4	105	*
55-59.................	2,233	65	1,711	1,570	113	28	*	94	173	11	38	*	5	97	39
60-64.................	1,266	29	865	836	11	18	*	39	58	*	29	17	13	175	41
65-69.................	815	12	450	444	6	*	*	59	54	*	11	26	*	203	*
70 OR OVER........	403	11	38	38	*	*	*	18	15	*	*	6	*	315	*
NO REPORT.............	81	*	68	62	*	6	*	2	*	*	*	*	*	11	*

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-6. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, RACE, AND TYPE OF EMPLOYER: 1977

	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
ALL FIELDS															
TOTAL	303,267	71,464	163,101	156,452	4,634	2,015	8,587	10,188	21,353	2,282	3,783	1,545	584	19,030	1,350
WHITE	270,305	62,566	146,059	140,107	4,054	1,898	7,686	9,144	19,370	2,121	3,409	1,327	459	16,996	1,168
BLACK	2,846	422	1,799	1,716	77	6	63	49	272	14	43	27	32	102	23
AM. INDIAN/ALSKN NATIVE	630	137	349	319	22	8	29	26	35	2	3	4	*	33	12
ASIAN/PACIFIC ISLANDER.	15,703	5,792	7,328	7,069	220	39	358	560	796	39	189	66	43	461	71
NO REPORT	13,783	2,547	7,566	7,241	261	64	451	409	880	106	137	121	50	1,438	78
PHYSICAL SCIENTISTS															
TOTAL	62,055	22,980	27,081	25,544	1,297	240	542	2,031	3,941	275	213	63	28	4,605	296
WHITE	55,319	20,686	24,037	22,686	1,144	207	473	1,754	3,540	254	168	45	28	4,065	269
BLACK	598	225	271	262	9	*	4	*	79	5	*	*	*	14	*
AM. INDIAN/ALSKN NATIVE	74	24	25	23	2	*	*	13	2	*	*	*	*	10	*
ASIAN/PACIFIC ISLANDER.	3,377	1,345	1,422	1,345	63	14	50	172	169	16	32	*	*	154	17
NO REPORT	2,687	700	1,326	1,228	79	19	15	92	151	*	13	18	*	362	10
CHEMISTS															
TOTAL	40,650	18,664	14,792	13,698	893	201	446	1,048	1,810	118	184	48	14	3,336	190
WHITE	36,413	16,844	13,266	12,301	797	168	393	910	1,607	112	141	30	14	2,925	171
BLACK	446	206	173	168	5	*	4	*	49	2	*	*	*	12	*
AM. INDIAN/ALSKN NATIVE	41	14	15	13	2	*	*	*	2	*	*	*	*	10	*
ASIAN/PACIFIC ISLANDER.	2,169	1,007	738	672	52	14	34	102	116	4	30	*	*	123	15
NO REPORT	1,581	593	600	544	37	19	15	36	36	*	13	18	*	266	4
PHYSICISTS/ASTRONOMERS															
TOTAL	21,405	4,316	12,289	11,846	404	39	96	983	2,131	157	29	15	14	1,269	106
WHITE	18,906	3,842	10,771	10,385	347	39	80	844	1,933	142	27	15	14	1,140	98
BLACK	152	19	98	94	4	*	*	*	30	3	*	*	*	2	*
AM. INDIAN/ALSKN NATIVE	33	10	10	10	*	*	*	13	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	1,208	338	684	673	11	*	16	70	53	12	2	*	*	31	2
NO REPORT	1,106	107	726	684	42	*	*	56	115	*	*	*	*	96	6
MATHEMATICAL SCIENTISTS															
TOTAL	15,406	1,282	12,228	11,774	360	94	*	261	593	50	23	28	11	833	97
WHITE	13,628	1,170	10,813	10,433	300	80	*	250	533	50	21	12	*	707	72
BLACK	130	4	101	96	4	1	*	4	2	*	*	*	11	7	1
AM. INDIAN/ALSKN NATIVE	38	*	15	15	*	*	*	*	9	*	*	4	*	*	10
ASIAN/PACIFIC ISLANDER.	733	67	601	560	33	8	*	*	22	*	*	12	*	19	12
NO REPORT	877	41	698	670	23	5	*	7	27	*	2	*	*	100	2
MATHEMATICIANS															
TOTAL	13,665	996	11,018	10,566	358	94	*	221	438	50	12	28	*	805	97
WHITE	12,036	899	9,696	9,316	300	80	*	210	406	50	10	12	*	681	72
BLACK	119	4	101	96	4	1	*	4	2	*	*	*	*	7	1
AM. INDIAN/ALSKN NATIVE	25	*	2	2	*	*	*	*	9	*	*	4	*	*	10
ASIAN/PACIFIC ISLANDER.	634	52	535	496	31	8	*	*	6	*	*	12	*	17	12
NO REPORT	851	41	684	656	23	5	*	7	15	*	2	*	*	100	2
STATISTICIANS															
TOTAL	1,741	286	1,210	1,208	2	*	*	40	155	*	11	*	11	28	*
WHITE	1,592	271	1,117	1,117	*	*	*	40	127	*	11	*	*	26	*
BLACK	11	*	*	*	*	*	*	*	*	*	*	*	11	*	*
AM. INDIAN/ALSKN NATIVE	13	*	13	13	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	99	15	66	64	2	*	*	*	16	*	*	*	*	2	*
NO REPORT	26	*	14	14	*	*	*	*	12	*	*	*	*	*	*
COMPUTER SPECIALISTS															
TOTAL	5,822	3,058	2,128	2,118	10	*	12	159	251	78	69	12	*	55	*
WHITE	4,995	2,554	1,844	1,841	3	*	12	144	240	78	69	12	*	42	*
BLACK	15	15	*	*	*	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	2	*	2	2	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	581	387	168	161	7	*	*	15	11	*	*	*	*	*	*
NO REPORT	229	102	114	114	*	*	*	*	*	*	*	*	*	13	*
ENVIRONMENTAL SCIENTISTS															
TOTAL	13,543	3,103	6,312	6,147	125	40	*	520	2,415	108	424	82	14	517	48
WHITE	12,537	2,803	5,861	5,700	123	38	*	483	2,233	108	418	82	14	487	48
BLACK	24	10	12	12	*	*	*	*	2	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	8	4	2	2	*	*	*	2	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	518	199	217	217	*	*	*	22	73	*	*	*	*	7	*
NO REPORT	456	87	220	216	2	2	*	13	107	*	6	*	*	23	*
EARTH SCIENTISTS															
TOTAL	10,235	2,700	4,641	4,507	112	22	*	296	1,634	25	331	82	8	470	48
WHITE	9,567	2,449	4,359	4,229	110	20	*	289	1,536	25	325	82	8	446	48
BLACK	19	10	7	7	*	*	*	*	2	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	6	4	2	2	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	342	166	131	131	*	*	*	7	35	*	*	*	*	3	*
NO REPORT	301	71	142	138	2	2	*	*	61	*	6	*	*	21	*
OCEANOGRAPHERS															
TOTAL	1,592	135	971	940	13	18	*	56	287	45	63	*	6	29	*
WHITE	1,462	118	896	865	13	18	*	56	255	45	63	*	6	23	*
BLACK	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	62	13	31	31	*	*	*	*	14	*	*	*	*	4	*
NO REPORT	68	4	44	44	*	*	*	*	18	*	*	*	*	2	*
ATMOSPHERIC SCIENTISTS															
TOTAL	1,716	268	700	700	*	*	*	168	494	38	30	*	*	18	*
WHITE	1,508	236	606	606	*	*	*	138	442	38	30	*	*	18	*
BLACK	5	*	5	5	*	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	2	*	*	*	*	*	*	2	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	114	20	55	55	*	*	*	15	24	*	*	*	*	*	*
NO REPORT	87	12	34	34	*	*	*	13	28	*	*	*	*	*	*
ENGINEERS															
TOTAL	46,539	22,870	15,911	15,709	185	17	21	1,551	3,519	686	270	114	23	1,493	81
WHITE	39,640	19,060	13,796	13,613	166	17	14	1,311	3,097	672	190	103	23	1,309	65
BLACK	134	48	58	58	*	*	*	6	18	2	*	2	*	*	*
AM. INDIAN/ALSKN NATIVE	51	23	26	25	1	*	*	*	2	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	4,902	3,000	1,312	1,295	17	*	*	177	240	*	68	9	*	80	16
NO REPORT	1,812	739	719	718	1	*	7	57	162	12	12	*	*	104	*

* NO CASES REPORTED

TABLE B-6. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, RACE, AND TYPE OF EMPLOYER: 1977
CONTINUED

	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
LIFE SCIENTISTS															
TOTAL......................	78,335	10,064	47,471	46,267	1,074	130	2,539	2,442	6,760	739	1,155	306	63	6,411	385
WHITE....................	70,176	8,915	42,663	41,541	992	130	2,109	2,168	6,192	663	1,042	271	50	5,761	342
BLACK....................	828	70	545	525	20	*	29	24	101	7	11	2	*	33	6
AM. INDIAN/ALSKN NATIVE	147	31	90	76	14	*	2	*	21	*	*	*	*	3	*
ASIAN/PACIFIC ISLANDER.	3,853	657	2,322	2,314	8	*	257	134	228	22	57	9	*	145	22
NO REPORT..............	3,331	391	1,851	1,811	40	*	142	116	218	47	45	24	13	469	15
BIOLOGICAL SCIENTISTS															
TOTAL......................	46,788	4,011	30,829	29,849	852	128	1,124	1,686	3,367	334	446	89	3	4,627	272
WHITE....................	41,790	3,504	27,593	26,659	806	128	922	1,491	3,109	301	395	80	3	4,149	243
BLACK....................	531	51	372	359	13	*	3	22	48	5	*	*	*	28	2
AM. INDIAN/ALSKN NATIVE	70	2	47	44	3	*	*	*	18	*	*	*	*	3	*
ASIAN/PACIFIC ISLANDER.	2,350	304	1,507	1,499	8	*	138	97	120	6	34	9	*	120	15
NO REPORT..............	2,047	150	1,310	1,288	22	*	61	76	72	22	17	*	*	327	12
AGRICULTURAL SCIENTISTS															
TOTAL......................	15,062	2,858	8,331	8,175	154	2	11	185	2,496	*	310	20	54	769	28
WHITE....................	13,748	2,526	7,683	7,556	125	2	*	144	2,316	*	299	20	41	691	28
BLACK....................	83	*	69	63	6	*	*	*	14	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	49	17	29	18	11	*	*	*	3	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	569	188	291	291	*	*	*	9	60	*	6	*	*	15	*
NO REPORT..............	613	127	259	247	12	*	11	32	103	*	5	*	13	63	*
MEDICAL SCIENTISTS															
TOTAL......................	16,485	3,195	8,311	8,243	68	*	1,404	571	897	405	399	197	6	1,015	85
WHITE....................	14,638	2,885	7,387	7,326	61	*	1,187	533	767	362	348	171	6	921	71
BLACK....................	214	19	104	103	1	*	26	2	39	2	11	2	*	5	4
AM. INDIAN/ALSKN NATIVE	28	12	14	14	*	*	2	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	934	165	524	524	*	*	119	28	48	16	17	*	*	10	7
NO REPORT..............	671	114	282	276	6	*	70	8	43	25	23	24	*	79	3
PSYCHOLOGISTS..............															
TOTAL......................	35,718	5,525	18,572	16,632	675	1,265	5,386	1,262	1,231	190	828	515	41	1,994	174
WHITE....................	32,842	5,055	17,037	15,268	560	1,209	4,991	1,206	1,131	169	793	426	41	1,834	159
BLACK....................	466	35	350	326	19	5	30	2	24	*	*	19	*	6	*
AM. INDIAN/ALSKN NATIVE	146	33	76	63	5	8	27	9	1	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	303	30	171	128	26	17	51	4	3	1	16	18	*	5	4
NO REPORT..............	1,961	372	938	847	65	26	287	41	72	20	19	52	*	149	11
SOCIAL SCIENTISTS															
TOTAL......................	45,849	2,582	33,398	32,261	908	229	87	1,962	2,643	156	801	425	404	3,122	269
WHITE....................	41,168	2,323	30,008	29,025	766	217	87	1,828	2,404	127	708	376	303	2,791	213
BLACK....................	651	15	462	437	25	*	*	13	46	*	32	4	21	42	16
AM. INDIAN/ALSKN NATIVE	164	22	113	113	*	*	*	2	*	2	5	*	*	20	*
ASIAN/PACIFIC ISLANDER.	1,436	107	1,115	1,049	66	*	*	36	50	*	16	18	43	51	*
NO REPORT..............	2,430	115	1,700	1,637	51	12	*	83	143	27	40	27	37	218	40
ECONOMISTS															
TOTAL......................	11,689	1,385	7,496	7,423	73	*	*	427	950	24	101	22	296	899	89
WHITE....................	10,436	1,204	6,773	6,705	68	*	*	404	857	24	99	17	214	778	66
BLACK....................	112	6	42	42	*	*	*	*	11	*	*	*	17	24	12
AM. INDIAN/ALSKN NATIVE	40	14	26	26	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	524	90	352	352	*	*	*	2	25	*	*	5	33	17	*
NO REPORT..............	577	71	303	298	5	*	*	21	57	*	2	*	32	80	11
SOCIOLOGISTS/ANTHRO.															
TOTAL......................	10,352	193	8,547	8,293	232	22	14	422	132	*	103	44	*	859	38
WHITE....................	9,323	174	7,676	7,443	211	22	14	397	115	*	88	41	*	792	26
BLACK....................	152	*	136	134	2	*	*	3	*	*	*	*	*	11	2
AM. INDIAN/ALSKN NATIVE	54	*	40	40	*	*	*	*	*	*	*	*	*	14	*
ASIAN/PACIFIC ISLANDER.	284	*	260	249	11	*	*	12	*	*	6	3	*	3	*
NO REPORT..............	539	19	435	427	8	*	*	10	17	*	9	*	*	39	10
OTHER SOCIAL SCIENTISTS															
TOTAL......................	23,808	1,004	17,355	16,545	603	207	73	1,113	1,561	132	597	359	108	1,364	142
WHITE....................	21,409	945	15,559	14,877	487	195	73	1,027	1,432	103	521	318	89	1,221	121
BLACK....................	387	9	284	261	23	*	*	10	35	*	32	4	4	7	2
AM. INDIAN/ALSKN NATIVE	70	8	47	47	*	*	*	2	*	2	5	*	*	6	*
ASIAN/PACIFIC ISLANDER.	628	17	503	448	55	*	*	22	25	*	10	10	10	31	*
NO REPORT..............	1,314	25	962	912	38	12	*	52	69	27	29	27	5	99	19

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-7. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AGE, AND PRIMARY WORK ACTIVITY: 1977

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
FIELD AND AGE	TOTAL	TOTAL	BASIC RE-SEARCH	APPL'D RE-SEARCH	DEVEL-OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH-ING	CON-SULT-ING	SALES/ PROF. SER-VICES	OTHER	NOT EM-PLOYED	NO REPORT
ALL FIELDS															
TOTAL......................	303,267	93,460	43,545	36,413	13,502	60,464	30,733	22,150	7,581	90,392	6,141	15,183	12,785	19,030	5,812
24 OR UNDER............	2	2	2	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	8,861	4,508	2,754	1,385	369	326	158	141	27	2,386	133	608	350	389	161
30-34..................	55,461	24,886	12,668	8,876	3,342	5,890	3,318	1,882	690	15,214	992	3,354	2,333	1,899	893
35-39..................	68,762	23,543	10,339	9,038	4,166	12,923	7,157	4,528	1,238	21,474	1,411	3,293	2,962	2,021	1,135
40-44..................	46,284	14,239	6,290	5,709	2,240	10,971	5,748	3,907	1,316	14,411	855	1,974	1,947	1,137	750
45-49..................	38,671	10,237	4,482	4,366	1,389	10,165	5,041	3,715	1,409	12,736	553	1,872	1,413	1,045	650
50-54..................	31,953	7,270	3,347	2,985	938	9,199	4,414	3,481	1,304	10,078	584	1,714	1,377	1,018	713
55-59..................	23,816	4,941	1,912	2,451	578	6,407	2,941	2,607	859	7,531	601	1,282	1,100	1,309	645
60-64..................	14,838	2,790	1,269	1,146	375	3,408	1,482	1,390	536	4,467	516	585	757	1,894	421
65-69..................	8,721	818	384	363	71	957	376	408	173	1,734	338	346	387	3,929	212
70 OR OVER.............	5,408	155	72	69	14	147	70	59	18	269	156	139	147	4,226	169
NO REPORT..............	490	71	26	25	20	71	28	32	11	92	2	16	12	163	63
PHYSICAL SCIENTISTS															
TOTAL......................	62,055	24,817	12,165	10,109	2,543	13,152	8,467	3,394	1,291	14,693	410	1,078	2,362	4,605	938
24 OR UNDER............	2	2	2	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	2,029	1,498	985	418	95	60	42	18	*	270	4	23	60	78	36
30-34..................	10,721	6,666	3,742	2,390	534	1,047	694	248	105	1,923	25	167	424	300	169
35-39..................	13,779	5,792	2,810	2,314	668	2,638	1,775	605	258	3,866	60	341	484	436	162
40-44..................	9,572	3,770	1,707	1,652	411	2,294	1,582	492	220	2,648	45	135	344	211	125
45-49..................	7,976	2,935	1,200	1,381	354	2,228	1,395	587	246	2,163	19	64	252	190	125
50-54..................	6,477	1,853	860	842	151	2,186	1,368	606	212	1,528	78	164	291	275	102
55-59..................	4,827	1,286	429	643	214	1,519	982	383	154	1,168	92	112	178	358	114
60-64..................	3,389	779	354	352	73	897	528	329	40	827	48	38	220	531	49
65-69..................	2,042	180	64	94	22	246	96	106	44	236	35	24	107	1,190	24
70 OR OVER.............	1,154	23	*	12	11	20	5	3	12	52	4	10	2	1,017	26
NO REPORT..............	87	33	12	11	10	17	*	17	*	12	*	*	*	19	6
CHEMISTS															
TOTAL......................	40,650	15,546	7,008	6,774	1,764	9,560	6,242	2,422	896	8,647	249	822	1,796	3,336	695
24 OR UNDER............	2	2	2	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	1,486	1,044	674	326	44	33	28	5	*	244	3	19	51	60	32
30-34..................	6,796	4,003	2,050	1,595	358	752	470	201	81	1,260	11	96	321	217	136
35-39..................	8,321	3,236	1,522	1,335	379	1,862	1,335	344	183	2,173	28	284	343	287	108
40-44..................	6,042	2,447	984	1,171	292	1,590	1,097	324	169	1,411	22	94	246	136	96
45-49..................	5,279	1,887	686	904	297	1,682	1,060	468	154	1,243	19	46	210	129	63
50-54..................	4,117	1,147	460	557	130	1,538	1,004	409	125	783	39	137	212	170	91
55-59..................	3,614	1,000	299	525	176	1,145	741	302	102	746	58	101	170	297	97
60-64..................	2,640	600	265	264	71	726	421	279	26	606	40	33	167	446	22
65-69..................	1,558	134	54	74	6	198	81	73	44	151	24	12	76	939	24
70 OR OVER.............	728	23	*	12	11	17	5	*	12	18	4	*	*	646	20
NO REPORT..............	67	23	12	11	*	17	*	17	*	12	*	*	*	9	6
PHYSICISTS/ASTRONOMERS															
TOTAL......................	21,405	9,271	5,157	3,335	779	3,592	2,225	972	395	6,046	162	256	566	1,269	243
24 OR UNDER............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	543	454	311	92	51	27	14	13	*	26	1	4	9	18	4
30-34..................	3,925	2,663	1,692	795	176	295	224	47	24	663	14	71	103	83	33
35-39..................	5,458	2,556	1,288	979	289	776	440	261	75	1,693	32	57	141	149	54
40-44..................	3,530	1,323	723	481	119	704	485	168	51	1,237	23	41	98	75	29
45-49..................	2,697	1,048	514	477	57	546	335	119	92	920	*	18	42	61	62
50-54..................	2,360	706	400	285	21	646	364	197	87	745	39	27	79	105	11
55-59..................	1,213	286	130	118	38	374	241	81	52	422	34	11	8	61	17
60-64..................	749	179	89	88	2	171	107	50	14	221	8	5	53	85	27
65-69..................	484	46	10	20	16	48	15	33	*	85	11	12	31	251	*
70 OR OVER.............	426	*	*	*	*	3	*	3	*	34	*	10	2	371	6
NO REPORT..............	20	10	*	*	10	*	*	*	*	*	*	*	*	10	*
MATHEMATICAL SCIENTISTS															
TOTAL......................	15,406	3,294	1,823	1,080	391	1,382	288	802	292	9,076	145	78	407	833	191
24 OR UNDER............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	678	190	131	51	8	9	*	*	9	418	9	*	11	24	17
30-34..................	3,275	792	507	174	111	133	29	68	36	2,041	52	20	108	88	41
35-39..................	4,215	970	469	364	137	376	79	224	73	2,596	52	20	39	122	40
40-44..................	2,278	469	296	119	54	241	54	132	55	1,373	19	8	77	76	15
45-49..................	1,735	309	135	128	46	214	51	120	43	1,097	5	15	56	30	9
50-54..................	1,175	253	142	98	13	227	38	164	25	617	*	7	40	18	13
55-59..................	764	142	62	80	*	123	19	68	36	398	*	*	34	44	23
60-64..................	617	136	56	58	22	54	13	26	15	332	8	8	28	40	11
65-69..................	405	25	17	8	*	5	5	*	*	172	*	*	1	187	15
70 OR OVER.............	258	8	8	*	*	*	*	*	*	28	*	*	13	202	7
NO REPORT..............	6	*	*	*	*	*	*	*	*	4	*	*	*	2	*
MATHEMATICIANS															
TOTAL......................	13,665	2,842	1,679	863	300	1,145	207	715	223	8,187	78	78	344	805	186
24 OR UNDER............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	609	190	131	51	8	9	*	*	9	353	5	*	11	24	17
30-34..................	2,916	704	479	137	88	111	29	57	25	1,845	27	20	80	88	41
35-39..................	3,687	766	417	242	107	314	48	204	62	2,350	38	20	39	120	40
40-44..................	2,026	406	268	114	24	209	29	125	55	1,252	*	8	67	74	10
45-49..................	1,534	288	131	111	46	164	35	99	30	974	*	15	56	28	9
50-54..................	1,081	221	126	82	13	196	29	143	24	586	*	7	40	18	13
55-59..................	668	134	54	80	*	97	19	68	10	351	*	*	19	44	23
60-64..................	519	108	56	38	14	40	13	19	8	289	8	8	24	31	11
65-69..................	388	25	17	8	*	5	5	*	*	162	*	*	1	180	15
70 OR OVER.............	231	*	*	*	*	*	*	*	*	21	*	*	7	196	7
NO REPORT..............	6	*	*	*	*	*	*	*	*	4	*	*	*	2	*
STATISTICIANS															
TOTAL......................	1,741	452	144	217	91	237	81	87	69	889	67	*	63	28	5
24 OR UNDER............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	69	*	*	*	*	*	*	*	*	65	4	*	*	*	*
30-34..................	359	88	28	37	23	22	*	11	11	196	25	*	28	*	*
35-39..................	528	204	52	122	30	62	31	20	11	246	14	*	*	2	*
40-44..................	252	63	28	5	30	32	25	7	*	121	19	*	10	2	5
45-49..................	201	21	4	17	*	50	16	21	13	123	5	*	*	2	*
50-54..................	94	32	16	16	*	31	9	21	1	31	*	*	*	*	*
55-59..................	96	8	8	*	*	26	*	*	26	47	*	*	15	*	*
60-64..................	98	28	*	20	8	14	*	7	7	43	*	*	4	9	*
65-69..................	17	*	*	*	*	*	*	*	*	10	*	*	*	7	*
70 OR OVER.............	27	8	8	*	*	*	*	*	*	7	*	*	6	6	*
NO REPORT..............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* NO CASES REPORTED

TABLE B-7. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AGE, AND PRIMARY WORK ACTIVITY: 197/
CONTINUED

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
FIELD AND AGE	TOTAL	TOTAL	BASIC RE- SEARCH	APPL'D RE- SEARCH	DEVEL- OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH- ING	CON- SULT- ING	SALES/ PROF. SER- VICES	OTHER	NOT EM- PLOYED	NO REPORT
COMPUTER SPECIALISTS															
TOTAL	5,822	2,599	283	494	1,822	1,402	735	466	201	1,192	155	65	216	55	138
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	256	165	30	52	83	10	10	*	*	69	5	*	*	*	7
30-34	1,724	904	111	175	618	267	170	72	25	308	46	12	98	16	73
35-39	1,538	662	44	86	532	408	212	175	21	332	22	11	55	4	44
40-44	899	343	49	35	259	301	169	81	51	164	30	13	25	13	10
45-49	675	262	28	71	163	213	104	52	57	135	19	13	15	14	4
50-54	406	163	15	60	88	140	45	48	47	92	2	*	9	*	*
55-59	220	67	3	15	49	56	22	34	*	66	23	*	*	8	*
60-64	90	33	3	*	30	*	*	*	*	19	8	16	14	*	*
65-69	11	*	*	*	*	4	*	4	*	7	*	*	*	*	*
70 OR OVER	3	*	*	*	*	3	3	*	*	*	*	*	*	*	*
NO REPORT	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ENVIRONMENTAL SCIENTISTS															
TOTAL	13,543	4,884	2,503	2,172	209	3,095	1,631	1,125	339	3,518	364	137	778	517	250
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	268	187	105	63	19	*	*	*	*	37	*	6	22	*	16
30-34	2,416	1,238	572	629	37	278	134	121	23	571	52	39	146	56	36
35-39	3,171	1,260	572	631	57	664	347	294	23	838	106	62	145	39	57
40-44	2,301	834	459	325	50	589	304	202	83	604	54	1	145	42	32
45-49	1,826	516	312	174	30	475	284	128	63	641	28	22	106	24	14
50-54	1,348	413	233	168	12	442	251	125	66	345	46	2	60	10	30
55-59	1,091	288	155	129	4	350	142	145	63	296	43	5	67	17	25
60-64	557	112	67	45	*	212	124	70	18	112	17	*	59	45	*
65-69	356	36	28	8	*	67	39	28	*	62	6	*	27	124	34
70 OR OVER	208	*	*	*	*	18	6	12	*	12	12	*	1	159	6
NO REPORT	1	*	*	*	*	*	*	*	*	*	*	*	*	1	*
EARTH SCIENTISTS															
TOTAL	10,235	3,175	1,440	1,591	144	2,330	1,115	931	284	2,988	294	120	637	470	221
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	175	126	58	63	5	*	*	*	*	31	*	2	*	*	16
30-34	1,666	752	277	438	37	208	114	84	10	431	44	37	129	31	34
35-39	2,268	764	250	474	40	466	236	219	11	721	94	62	110	21	30
40-44	1,792	579	298	252	29	437	188	176	73	538	42	*	122	42	32
45-49	1,436	367	227	121	19	371	194	128	49	536	19	12	93	24	14
50-54	1,056	262	122	128	12	338	167	105	66	315	46	2	54	9	30
55-59	848	192	120	70	2	287	93	137	57	244	26	5	54	15	25
60-64	465	99	60	39	*	163	94	51	18	98	13	*	47	45	*
65-69	338	34	28	6	*	53	29	24	*	62	4	*	27	124	34
70 OR OVER	190	*	*	*	*	7	*	7	*	12	6	*	1	158	6
NO REPORT	1	*	*	*	*	*	*	*	*	*	*	*	*	1	*
OCEANOGRAPHERS															
TOTAL	1,592	789	605	173	11	400	271	101	28	253	29	5	79	29	8
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	51	22	22	*	*	*	*	*	*	3	*	4	22	*	*
30-34	375	239	191	48	*	39	12	27	*	76	*	*	14	7	*
35-39	486	244	208	36	*	106	74	20	12	79	12	*	19	18	8
40-44	231	116	100	16	*	74	56	18	*	28	*	1	12	*	*
45-49	200	76	31	34	11	60	50	*	10	49	9	*	6	*	*
50-54	112	58	43	15	*	29	16	13	*	18	*	*	6	1	*
55-59	68	25	5	20	*	35	29	*	6	*	6	*	*	2	*
60-64	46	9	5	4	*	37	18	19	*	*	*	*	*	*	*
65-69	16	*	*	*	*	14	10	4	*	*	2	*	*	*	*
70 OR OVER	7	*	*	*	*	6	6	*	*	*	*	*	*	1	*
NO REPORT	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ATMOSPHERIC SCIENTISTS															
TOTAL	1,716	920	458	408	54	365	245	93	27	277	41	12	62	18	21
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	42	39	25	*	14	*	*	*	*	3	*	*	*	*	*
30-34	375	247	104	143	*	31	8	10	13	64	8	2	3	18	2
35-39	417	252	114	121	17	92	37	55	*	38	*	*	16	*	19
40-44	278	139	61	57	21	78	60	8	10	38	12	*	11	*	*
45-49	190	73	54	19	*	44	40	*	4	56	*	10	7	*	*
50-54	180	93	68	25	*	75	68	7	*	12	*	*	*	*	*
55-59	175	71	30	39	2	28	20	8	*	52	11	*	13	*	*
60-64	46	4	2	2	*	12	12	*	*	14	4	*	12	*	*
65-69	2	2	*	2	*	*	*	*	*	*	*	*	*	*	*
70 OR OVER	11	*	*	*	*	5	*	5	*	*	6	*	*	*	*
NO REPORT	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ENGINEERS															
TOTAL	46,539	17,182	1,659	8,653	6,870	14,540	8,648	4,258	1,634	8,813	1,613	665	1,621	1,493	612
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	809	454	35	329	90	22	7	15	*	204	44	16	69	*	*
30-34	7,766	4,481	417	2,433	1,631	1,418	935	328	155	1,012	236	173	200	156	90
35-39	12,372	5,113	409	2,380	2,324	3,823	2,444	1,103	276	1,947	393	209	465	202	220
40-44	8,789	3,032	364	1,370	1,298	3,071	1,897	893	281	1,848	283	80	244	127	104
45-49	6,105	1,750	177	969	604	2,469	1,408	732	329	1,418	121	72	174	61	40
50-54	4,553	1,233	126	603	504	1,657	976	468	213	1,130	139	12	187	113	82
55-59	3,433	673	62	405	206	1,394	682	498	214	797	176	56	150	163	24
60-64	1,491	350	50	131	169	491	210	157	124	301	115	13	95	115	11
65-69	800	72	19	22	31	150	61	47	42	144	74	34	20	298	8
70 OR OVER	358	3	*	*	3	23	6	17	*	12	32	*	17	238	33
NO REPORT	63	21	*	11	10	22	22	*	*	*	*	*	*	20	*
LIFE SCIENTISTS															
TOTAL	78,335	29,578	19,998	8,660	920	13,674	7,489	4,368	1,817	18,991	1,185	3,039	3,815	6,411	1,642
24 OR UNDER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29	2,348	1,455	1,135	285	35	103	83	15	5	338	29	83	77	228	35
30-34	14,723	7,818	5,960	1,593	265	1,306	852	297	157	3,006	167	726	740	750	210
35-39	16,821	7,053	4,866	1,925	262	2,465	1,496	728	241	4,344	247	702	964	710	336
40-44	10,865	4,237	2,724	1,441	72	2,192	1,198	733	261	2,784	229	441	532	306	144
45-49	9,880	3,275	2,030	1,137	108	2,422	1,210	821	391	2,853	80	315	367	320	248
50-54	8,647	2,530	1,582	883	65	2,465	1,269	812	384	2,358	108	255	400	347	184
55-59	6,290	1,842	949	841	52	1,547	802	577	168	1,690	124	195	372	331	189
60-64	4,336	964	541	366	57	921	443	304	174	1,105	98	194	177	718	159
65-69	2,590	335	166	165	4	200	118	58	24	435	68	59	119	1,300	74
70 OR OVER	1,732	58	37	21	*	41	12	23	6	57	35	63	61	1,354	63
NO REPORT	103	11	8	3	*	12	6	*	6	21	*	6	6	47	*

* NO CASES REPORTED

TABLE B-7. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AGE, AND PRIMARY WORK ACTIVITY: 1977
CONTINUED

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
FIELD AND AGE	TOTAL	TOTAL	BASIC RE- SEARCH	APPL'D RE- SEARCH	DEVEL- OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH- ING	CON- SULT- ING	SALES/ PROF. SER- VICES	OTHER	NOT EM- PLOYED	NO REPORT
BIOLOGICAL SCIENTISTS															
TOTAL......................	46,788	19,187	15,678	3,117	392	6,009	3,129	2,017	863	13,498	425	462	1,688	4,627	892
24 OR UNDER............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	1,554	1,123	971	134	18	77	61	12	4	190	5	9	43	98	9
30-34..................	9,446	5,623	4,814	691	118	558	335	149	74	2,236	61	73	331	483	81
35-39..................	10,580	4,553	3,747	700	106	1,229	799	299	131	3,257	121	158	445	586	231
40-44..................	6,071	2,581	2,063	463	55	800	400	327	73	2,049	56	83	184	203	75
45-49..................	5,464	1,998	1,606	373	19	995	489	322	184	1,886	55	41	138	217	134
50-54..................	5,013	1,519	1,171	337	11	1,163	522	462	179	1,650	52	44	225	260	100
55-59..................	3,287	980	695	255	30	611	270	244	97	1,083	31	43	204	254	81
60-64..................	2,402	583	440	112	31	441	187	157	97	707	23	11	41	481	115
65-69..................	1,719	181	143	34	4	123	60	39	24	338	9	*	60	978	30
70 OR OVER.............	1,192	35	20	15	*	12	6	6	*	54	12	*	11	1,032	36
NO REPORT..............	60	11	8	3	*	*	*	*	*	8	*	*	6	35	*
AGRICULTURAL SCIENTISTS															
TOTAL......................	15,062	5,542	1,296	3,972	274	3,341	2,120	861	360	2,822	463	510	1,300	769	315
24 OR UNDER............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	257	118	32	86	*	11	8	3	*	103	19	*	*	*	6
30-34..................	2,063	795	177	528	90	376	294	42	40	422	46	132	211	49	32
35-39..................	2,863	1,227	357	805	65	499	326	149	24	524	86	109	362	9	47
40-44..................	2,338	1,007	261	746	*	508	329	125	54	340	127	85	211	20	40
45-49..................	2,266	759	136	560	63	666	343	229	94	480	8	74	165	55	59
50-54..................	1,704	632	166	442	24	535	359	95	81	298	32	50	118	12	27
55-59..................	1,800	616	121	489	6	523	320	158	45	371	61	30	103	43	53
60-64..................	986	250	39	185	26	205	129	54	22	214	56	18	78	138	27
65-69..................	466	132	7	125	*	6	6	*	*	57	11	6	26	210	18
70 OR OVER.............	294	6	*	6	*	6	*	6	*	*	17	6	26	227	6
NO REPORT..............	25	*	*	*	*	6	6	*	*	13	*	*	*	6	*
MEDICAL SCIENTISTS															
TOTAL......................	16,485	4,849	3,024	1,571	254	4,324	2,240	1,490	594	2,671	297	2,067	827	1,015	435
24 OR UNDER............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	537	214	132	65	17	15	14	*	1	45	5	74	34	130	20
30-34..................	3,214	1,400	969	374	57	372	223	106	43	348	60	521	198	218	97
35-39..................	3,378	1,273	762	420	91	737	371	280	86	563	40	435	157	115	58
40-44..................	2,456	649	400	232	17	884	469	281	134	355	46	273	137	83	29
45-49..................	2,150	518	288	204	26	761	378	270	113	487	17	200	64	48	55
50-54..................	1,930	379	245	104	30	767	388	255	124	410	24	161	57	75	57
55-59..................	1,203	246	133	97	16	413	212	175	26	236	32	122	65	34	55
60-64..................	948	131	62	69	*	275	127	93	55	184	19	165	58	99	17
65-69..................	405	22	16	6	*	71	52	19	*	40	48	53	33	112	26
70 OR OVER.............	246	17	17	*	*	23	6	11	6	3	6	57	24	95	21
NO REPORT..............	18	*	*	*	*	6	*	*	6	*	*	6	*	6	*
PSYCHOLOGISTS..............															
TOTAL......................	35,718	4,026	1,948	1,765	313	5,920	1,625	3,467	828	10,836	1,481	9,585	1,175	1,994	701
24 OR UNDER............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	1,442	218	140	76	2	68	12	55	1	578	42	445	25	20	46
30-34..................	7,107	1,135	552	516	67	712	195	435	82	2,230	289	2,181	196	249	115
35-39..................	6,972	935	524	342	69	1,028	303	581	144	2,367	274	1,823	230	216	99
40-44..................	5,014	577	243	274	60	1,099	287	655	157	1,485	145	1,191	201	212	104
45-49..................	4,739	466	216	215	35	1,088	323	626	139	1,353	189	1,290	159	152	42
50-54..................	4,315	294	159	107	28	971	271	555	145	1,350	144	1,218	145	91	102
55-59..................	2,981	214	63	130	21	556	159	304	93	843	113	868	120	173	94
60-64..................	1,644	115	25	73	17	333	38	228	67	439	153	283	76	193	52
65-69..................	876	50	21	15	14	56	32	24	*	156	103	216	6	275	14
70 OR OVER.............	577	22	5	17	*	9	5	4	*	32	29	60	17	405	3
NO REPORT..............	51	*	*	*	*	*	*	*	*	3	*	10	*	8	30
SOCIAL SCIENTISTS															
TOTAL......................	45,849	7,080	3,166	3,480	434	7,299	1,850	4,270	1,179	23,273	788	536	2,411	3,122	1,340
24 OR UNDER............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	1,031	341	193	111	37	54	4	38	12	472	*	35	86	39	4
30-34..................	7,729	1,852	807	966	79	729	309	313	107	4,123	125	36	421	284	159
35-39..................	9,894	1,758	645	996	117	1,521	501	818	202	5,184	257	125	580	292	177
40-44..................	6,566	977	448	493	36	1,184	257	719	208	3,505	50	105	379	150	216
45-49..................	5,735	724	384	291	49	1,056	266	649	141	3,076	92	81	284	254	168
50-54..................	5,032	531	230	224	77	1,111	196	703	212	2,658	67	56	245	164	200
55-59..................	4,210	429	189	208	32	862	133	598	131	2,273	30	46	179	215	176
60-64..................	2,714	301	173	121	7	500	126	276	98	1,332	69	33	88	252	139
65-69..................	1,641	120	69	51	*	229	25	141	63	522	52	13	107	555	43
70 OR OVER.............	1,118	41	22	19	*	33	33	*	*	76	44	6	36	851	31
NO REPORT..............	179	6	6	*	*	20	*	15	5	52	2	*	6	66	27
ECONOMISTS															
TOTAL......................	11,689	2,517	678	1,705	134	1,940	524	1,160	256	5,115	277	146	562	899	233
24 OR UNDER............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	322	177	90	69	18	*	*	*	*	115	*	*	30	*	*
30-34..................	1,930	777	189	559	29	132	73	45	14	866	20	*	86	26	23
35-39..................	2,638	646	119	488	39	476	159	306	11	1,090	83	33	192	91	27
40-44..................	1,381	300	114	186	*	246	78	140	28	671	15	21	58	22	48
45-49..................	1,370	186	77	109	*	275	66	171	38	708	31	26	69	49	26
50-54..................	1,246	189	44	97	48	303	57	181	65	615	29	12	58	15	25
55-59..................	1,000	141	28	113	*	203	41	131	31	492	30	25	19	58	32
60-64..................	874	86	13	73	*	192	32	106	54	441	37	16	21	54	27
65-69..................	417	13	2	11	*	98	3	80	15	67	15	10	19	173	22
70 OR OVER.............	452	*	*	*	*	15	15	*	*	48	17	3	10	356	3
NO REPORT..............	59	2	2	*	*	*	*	*	*	2	*	*	*	55	*
SOCIOLOGISTS/ANTHRO.															
TOTAL......................	10,352	1,641	978	590	73	1,088	349	569	170	5,945	29	71	414	859	305
24 OR UNDER............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29..................	236	81	65	14	2	*	*	*	*	134	*	*	*	21	*
30-34..................	1,709	379	319	60	*	132	60	49	23	992	2	*	68	113	23
35-39..................	2,110	397	143	232	22	132	70	39	23	1,402	*	34	61	72	12
40-44..................	1,482	219	105	101	13	208	50	140	18	862	*	21	74	54	44
45-49..................	1,298	219	133	71	15	120	42	59	19	759	17	*	49	113	21
50-54..................	1,255	108	78	30	*	190	84	72	34	765	*	13	50	44	85
55-59..................	977	132	65	46	21	143	3	113	27	553	*	*	37	60	52
60-64..................	574	46	34	12	*	105	27	66	12	313	*	*	47	23	40
65-69..................	409	52	36	16	*	40	*	26	14	113	10	*	4	179	11
70 OR OVER.............	263	8	*	8	*	13	13	*	*	28	*	3	24	180	7
NO REPORT..............	39	*	*	*	*	5	*	5	*	24	*	*	*	*	10

* NO CASES REPORTED

TABLE B-7. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AGE, AND PRIMARY WORK ACTIVITY: 1977
CONTINUED

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
FIELD AND AGE	TOTAL	TOTAL	BASIC RE-SEARCH	APPL'D RE-SEARCH	DEVEL-OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH-ING	CON-SULT-ING	SALES/ PROF. SER-VICES	OTHER	NOT EM-PLOYED	NO REPORT
OTHER SOCIAL SCIENTISTS															
TOTAL......................	23,808	2,922	1,510	1,185	227	4,271	977	2,541	753	12,213	482	319	1,435	1,364	802
24 OR UNDER............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25-29...................	473	83	38	28	17	54	4	38	12	223	*	35	56	18	4
30-34...................	4,090	696	299	347	50	465	176	219	70	2,265	103	36	267	145	113
35-39...................	5,146	715	383	276	56	913	272	473	168	2,692	174	58	327	129	138
40-44...................	3,703	458	229	206	23	730	129	439	162	1,972	35	63	247	74	124
45-49...................	3,067	319	174	111	34	661	158	419	84	1,609	44	55	166	92	121
50-54...................	2,531	234	108	97	29	618	55	450	113	1,278	38	31	137	105	90
55-59...................	2,233	156	96	49	11	516	89	354	73	1,228	*	21	123	97	92
60-64...................	1,266	169	126	36	7	203	67	104	32	578	32	17	20	175	72
65-69...................	815	55	31	24	*	91	22	35	34	342	27	3	84	203	10
70 OR OVER.............	403	33	22	11	*	5	5	*	*	*	27	*	2	315	21
NO REPORT..............	81	4	4	*	*	15	*	10	5	26	2	*	6	11	17

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-8. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, RACE, AND PRIMARY WORK ACTIVITY: 1977

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
FIELD AND RACE	TOTAL	TOTAL	BASIC RE-SEARCH	APPL'D RE-SEARCH	DEVEL-OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH-ING	CON-SULT-ING	SALES/ PROF. SER-VICES	OTHER	NOT EM-PLOYED	NO REPORT
ALL FIELDS															
TOTAL....................	303,267	93,460	43,545	36,413	13,502	60,464	30,733	22,150	7,581	90,392	6,141	15,183	12,785	19,030	5,812
WHITE..................	270,305	80,261	37,909	31,307	11,045	55,724	28,176	20,590	6,958	81,507	5,518	13,908	11,506	16,996	4,885
BLACK..................	2,846	612	295	251	66	805	379	313	113	962	33	131	123	102	78
AM. INDIAN/ALSKN NATIVE	630	161	57	83	21	80	31	45	4	228	14	86	9	33	19
ASIAN/PACIFIC ISLANDER.	15,703	8,409	3,314	3,245	1,850	1,797	1,127	459	211	3,431	360	339	591	461	315
NO REPORT.............	13,783	4,017	1,970	1,527	520	2,058	1,020	743	295	4,264	216	719	556	1,438	515
PHYSICAL SCIENTISTS															
TOTAL....................	62,055	24,817	12,165	10,109	2,543	13,152	8,467	3,394	1,291	14,693	410	1,078	2,362	4,605	938
WHITE..................	55,319	21,688	10,471	8,963	2,254	12,141	7,839	3,125	1,177	13,202	403	945	2,096	4,065	779
BLACK..................	598	182	84	92	6	171	130	17	24	145	*	63	20	14	3
AM. INDIAN/ALSKN NATIVE	74	31	5	13	13	10	10	*	*	20	*	*	*	10	3
ASIAN/PACIFIC ISLANDER.	3,377	1,980	1,070	750	160	380	284	65	31	619	7	46	106	154	85
NO REPORT.............	2,687	936	535	291	110	450	204	187	59	707	*	24	140	362	68
CHEMISTS															
TOTAL....................	40,650	15,546	7,008	6,774	1,764	9,560	6,242	2,422	896	8,647	248	822	1,796	3,336	695
WHITE..................	36,413	13,672	6,105	6,012	1,555	8,791	5,736	2,245	810	7,888	248	693	1,599	2,925	597
BLACK..................	446	115	47	62	6	134	97	13	24	109	*	63	10	12	3
AM. INDIAN/ALSKN NATIVE	41	18	5	13	*	*	*	*	*	10	*	*	*	10	3
ASIAN/PACIFIC ISLANDER.	2,169	1,267	616	517	134	313	235	56	22	304	*	42	78	123	42
NO REPORT.............	1,581	474	235	170	69	322	174	108	40	336	*	24	109	266	50
PHYSICISTS/ASTRONOMERS															
TOTAL....................	21,405	9,271	5,157	3,335	779	3,592	2,225	972	395	6,046	162	256	566	1,269	243
WHITE..................	18,906	8,016	4,366	2,951	699	3,350	2,103	880	367	5,314	155	252	497	1,140	182
BLACK..................	152	67	37	30	*	37	33	4	*	36	*	*	10	2	*
AM. INDIAN/ALSKN NATIVE	33	13	*	*	13	10	10	*	*	10	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	1,208	713	454	233	26	67	49	9	9	315	7	4	28	31	43
NO REPORT.............	1,106	462	300	121	41	128	30	79	19	371	*	*	31	96	18
MATHEMATICAL SCIENTISTS															
TOTAL....................	15,406	3,294	1,823	1,080	391	1,382	288	802	292	9,076	145	78	407	833	191
WHITE..................	13,628	2,833	1,556	916	361	1,257	244	737	276	8,101	136	74	389	707	131
BLACK..................	130	10	2	8	*	33	11	20	2	76	*	*	*	7	4
AM. INDIAN/ALSKN NATIVE	38	9	*	9	*	10	10	*	*	5	*	*	4	*	10
ASIAN/PACIFIC ISLANDER.	733	227	134	75	18	48	13	26	9	397	9	4	*	19	29
NO REPORT.............	877	215	131	72	12	34	10	19	5	497	*	*	14	100	17
MATHEMATICIANS															
TOTAL....................	13,665	2,842	1,679	863	300	1,145	207	715	223	8,187	78	78	344	805	186
WHITE..................	12,036	2,426	1,429	709	288	1,041	184	650	207	7,277	73	74	338	681	126
BLACK..................	119	10	2	8	*	22	*	20	2	76	*	*	*	7	4
AM. INDIAN/ALSKN NATIVE	25	9	*	9	*	*	*	*	*	2	*	*	4	*	10
ASIAN/PACIFIC ISLANDER.	634	182	117	65	*	48	13	26	9	349	5	4	*	17	29
NO REPORT.............	851	215	131	72	12	34	10	19	5	483	*	*	2	100	17
STATISTICIANS															
TOTAL....................	1,741	452	144	217	91	237	81	87	69	889	67	*	63	28	5
WHITE..................	1,592	407	127	207	73	216	60	87	69	824	63	*	51	26	5
BLACK..................	11	*	*	*	*	11	11	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	13	*	*	*	*	10	10	*	*	3	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	99	45	17	10	18	*	*	*	*	48	4	*	*	2	*
NO REPORT.............	26	*	*	*	*	*	*	*	*	14	*	*	12	*	*
COMPUTER SPECIALISTS															
TOTAL....................	5,822	2,599	283	494	1,822	1,402	735	466	201	1,192	155	65	216	55	138
WHITE..................	4,995	2,190	264	397	1,529	1,293	694	434	165	991	144	54	189	42	92
BLACK..................	15	3	*	*	3	5	*	5	*	*	*	*	7	*	*
AM. INDIAN/ALSKN NATIVE	2	*	*	*	*	*	*	*	*	2	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	581	337	*	69	268	81	41	27	13	124	11	*	4	*	24
NO REPORT.............	229	69	19	28	22	23	*	*	23	75	*	11	16	13	22
ENVIRONMENTAL SCIENTISTS															
TOTAL....................	13,543	4,884	2,503	2,172	209	3,095	1,631	1,125	339	3,518	364	137	778	517	250
WHITE..................	12,537	4,417	2,302	1,969	146	2,961	1,521	1,107	333	3,322	258	120	727	487	245
BLACK..................	24	10	*	10	*	7	2	5	*	2	*	*	*	*	5
AM. INDIAN/ALSKN NATIVE	8	6	4	2	*	*	*	*	*	2	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	518	296	102	155	39	11	7	4	*	77	83	4	40	7	*
NO REPORT.............	456	155	95	36	24	116	101	9	6	115	23	13	11	23	*
EARTH SCIENTISTS															
TOTAL....................	10,235	3,175	1,440	1,591	144	2,330	1,115	931	284	2,988	294	120	637	470	221
WHITE..................	9,567	2,896	1,344	1,457	95	2,270	1,065	927	278	2,838	206	109	586	446	216
BLACK..................	19	10	*	10	*	2	2	*	*	2	*	*	*	*	5
AM. INDIAN/ALSKN NATIVE	6	4	2	2	*	*	*	*	*	2	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	342	167	41	101	25	11	7	4	*	42	77	2	40	3	*
NO REPORT.............	301	98	53	21	24	47	41	*	6	104	11	9	11	21	*
OCEANOGRAPHERS															
TOTAL....................	1,592	789	605	173	11	400	271	101	28	253	29	5	79	29	8
WHITE..................	1,462	729	572	157	*	359	230	101	28	234	29	1	79	23	8
BLACK..................	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	62	39	14	14	11	*	*	*	*	19	*	*	*	4	*
NO REPORT.............	68	21	19	2	*	41	41	*	*	*	*	4	*	2	*
ATMOSPHERIC SCIENTISTS															
TOTAL....................	1,716	920	458	408	54	365	245	93	27	277	41	12	62	18	21
WHITE..................	1,508	792	386	355	51	332	226	79	27	250	23	10	62	18	21
BLACK..................	5	*	*	*	*	5	*	5	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	2	2	2	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	114	90	47	40	3	*	*	*	*	16	6	2	*	*	*
NO REPORT.............	87	36	23	13	*	28	19	9	*	11	12	*	*	*	*
ENGINEERS															
TOTAL....................	46,539	17,182	1,659	8,653	6,870	14,540	8,648	4,258	1,634	8,813	1,613	665	1,621	1,493	612
WHITE..................	39,640	13,416	1,314	6,745	5,357	13,347	7,897	3,934	1,516	7,651	1,393	637	1,347	1,309	540
BLACK..................	134	41	3	29	9	68	49	19	*	21	*	2	2	*	*
AM. INDIAN/ALSKN NATIVE	51	18	2	14	2	29	2	25	2	1	3	*	*	*	*
ASIAN/PACIFIC ISLANDER.	4,902	2,908	234	1,445	1,229	661	420	174	67	772	199	14	209	80	59
NO REPORT.............	1,812	799	106	420	273	435	280	106	49	368	18	12	63	104	13

* NO CASES REPORTED

TABLE B-8. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, RACE, AND PRIMARY WORK ACTIVITY: 1977
CONTINUED

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
FIELD AND RACE	TOTAL	TOTAL	BASIC RE-SEARCH	APPL'D RE-SEARCH	DEVEL-OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH-ING	CON-SULT-ING	SALES/ PROF. SER-VICES	OTHER	NOT EM-PLOYED	NO REPORT
LIFE SCIENTISTS															
TOTAL	78,335	29,578	19,998	8,660	920	13,674	7,489	4,368	1,817	18,991	1,185	3,039	3,815	6,411	1,642
WHITE	70,176	25,773	17,392	7,609	772	12,568	6,877	4,041	1,650	17,376	1,078	2,621	3,561	5,761	1,438
BLACK	828	217	153	32	32	235	110	98	27	243	15	28	14	33	43
AM. INDIAN/ALSKN NATIVE	147	52	27	22	3	12	6	6	*	50	*	22	2	3	6
ASIAN/PACIFIC ISLANDER.	3,853	2,328	1,659	590	79	467	293	123	51	498	42	183	129	145	61
NO REPORT	3,331	1,208	767	407	34	392	203	100	89	824	50	185	109	469	94
BIOLOGICAL SCIENTISTS															
TOTAL	46,788	19,187	15,678	3,117	392	6,009	3,129	2,017	863	13,498	425	462	1,688	4,627	892
WHITE	41,790	16,630	13,629	2,679	322	5,506	2,868	1,840	798	12,355	388	409	1,563	4,149	790
BLACK	531	145	127	3	15	157	76	64	17	183	6	*	4	28	8
AM. INDIAN/ALSKN NATIVE	70	33	23	10	*	3	*	3	*	25	*	*	*	3	6
ASIAN/PACIFIC ISLANDER.	2,350	1,577	1,303	244	30	174	103	58	13	349	22	37	52	120	19
NO REPORT	2,047	802	596	181	25	169	82	52	35	586	9	16	69	327	69
AGRICULTURAL SCIENTISTS															
TOTAL	15,062	5,542	1,296	3,972	274	3,341	2,120	861	360	2,822	463	510	1,300	769	315
WHITE	13,748	4,956	1,161	3,533	262	3,075	1,931	824	320	2,639	412	431	1,259	691	285
BLACK	83	29	3	26	*	14	14	*	*	26	5	*	3	*	6
AM. INDIAN/ALSKN NATIVE	49	15	*	12	3	3	*	3	*	17	*	14	*	*	*
ASIAN/PACIFIC ISLANDER.	569	322	88	234	*	139	112	16	11	36	8	8	20	15	21
NO REPORT	613	220	44	167	9	110	63	18	29	104	38	57	18	63	3
MEDICAL SCIENTISTS															
TOTAL	16,485	4,849	3,024	1,571	254	4,324	2,240	1,490	594	2,671	297	2,067	827	1,015	435
WHITE	14,638	4,187	2,602	1,397	188	3,987	2,078	1,377	532	2,382	278	1,781	739	921	363
BLACK	214	43	23	3	17	64	20	34	10	34	4	28	7	5	29
AM. INDIAN/ALSKN NATIVE	28	4	4	*	*	6	6	*	*	8	*	8	2	*	*
ASIAN/PACIFIC ISLANDER.	934	429	268	112	49	154	78	49	27	113	12	138	57	10	21
NO REPORT	671	186	127	59	*	113	58	30	25	134	3	112	22	79	22
PSYCHOLOGISTS															
TOTAL	35,718	4,026	1,948	1,765	313	5,920	1,625	3,467	828	10,836	1,481	9,585	1,175	1,994	701
WHITE	32,842	3,696	1,782	1,636	278	5,483	1,460	3,239	784	9,935	1,372	8,941	1,019	1,834	562
BLACK	466	90	34	45	11	105	33	49	23	166	13	36	50	6	*
AM. INDIAN/ALSKN NATIVE	146	9	*	9	*	10	1	9	*	52	11	64	*	*	*
ASIAN/PACIFIC ISLANDER.	303	29	21	6	2	19	13	6	*	124	4	88	23	5	11
NO REPORT	1,961	202	111	69	22	303	118	164	21	559	81	456	83	149	128
SOCIAL SCIENTISTS															
TOTAL	45,849	7,080	3,166	3,480	434	7,299	1,850	4,270	1,179	23,273	788	536	2,411	3,122	1,340
WHITE	41,168	6,248	2,828	3,072	348	6,674	1,644	3,973	1,057	20,929	734	516	2,178	2,791	1,098
BLACK	651	59	19	35	5	181	44	100	37	309	5	2	30	42	23
AM. INDIAN/ALSKN NATIVE	164	36	19	14	3	9	2	5	2	96	*	*	3	20	*
ASIAN/PACIFIC ISLANDER.	1,436	304	94	155	55	130	56	34	40	820	5	*	80	51	46
NO REPORT	2,430	433	206	204	23	305	104	158	43	1,119	44	18	120	218	173
ECONOMISTS															
TOTAL	11,689	2,517	678	1,705	134	1,940	524	1,160	256	5,115	277	146	562	899	233
WHITE	10,436	2,188	584	1,493	111	1,794	462	1,101	231	4,575	250	146	512	778	193
BLACK	112	23	*	23	*	30	*	12	18	30	*	*	5	24	*
AM. INDIAN/ALSKN NATIVE	40	27	13	14	*	*	*	*	*	13	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	524	159	26	110	23	35	10	25	*	292	*	*	7	17	14
NO REPORT	577	120	55	65	*	81	52	22	7	205	27	*	38	80	26
SOCIOLOGISTS/ANTHRO.															
TOTAL	10,352	1,641	978	590	73	1,088	349	569	170	5,945	29	71	414	859	305
WHITE	9,323	1,481	878	552	51	957	308	525	124	5,356	29	69	384	792	255
BLACK	152	13	11	*	2	36	3	31	2	68	*	2	4	11	18
AM. INDIAN/ALSKN NATIVE	54	3	3	*	*	*	*	*	*	37	*	*	*	14	*
ASIAN/PACIFIC ISLANDER.	284	38	13	5	20	39	8	2	29	195	*	*	6	3	3
NO REPORT	539	106	73	33	*	56	30	11	15	289	*	*	20	39	29
OTHER SOCIAL SCIENTISTS															
TOTAL	23,808	2,922	1,510	1,185	227	4,271	977	2,541	753	12,213	482	319	1,435	1,364	802
WHITE	21,409	2,579	1,366	1,027	186	3,923	874	2,347	702	10,998	455	301	1,282	1,221	650
BLACK	387	23	8	12	3	115	41	57	17	211	5	*	21	7	5
AM. INDIAN/ALSKN NATIVE	70	6	3	*	3	9	2	5	2	46	*	*	3	6	*
ASIAN/PACIFIC ISLANDER.	628	107	55	40	12	56	38	7	11	333	5	*	67	31	29
NO REPORT	1,314	207	78	106	23	168	22	125	21	625	17	18	62	99	118

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-9. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, TYPE OF EMPLOYER, AND PRIMARY WORK ACTIVITY: 1977

FIELD AND TYPE OF EMPLOYER	TOTAL	RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....				TEACHING	CONSULTING	SALES/ PROF. SERVICES	OTHER	NOT EMPLOYED	NO REPORT
		TOTAL	BASIC RESEARCH	APPL'D RESEARCH	DEVELOPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH						
ALL FIELDS															
TOTAL	303,267	93,460	43,545	36,413	13,502	60,464	30,733	22,150	7,581	90,392	6,141	15,183	12,785	19,030	5,812
BUSINESS/INDUSTRY	71,464	31,339	4,631	16,537	10,171	23,934	15,917	6,149	1,868	242	4,133	6,236	4,389	*	1,191
EDUCATIONAL INSTITUTIONS	163,101	42,617	30,039	11,076	1,502	20,036	6,135	10,079	3,822	89,286	955	3,263	4,279	*	2,665
4-YR. COLL./UNIV	156,452	42,461	29,997	10,999	1,465	19,127	6,036	9,371	3,720	84,832	798	2,544	4,125	*	2,565
2-YR. COLLEGES	4,634	114	42	48	24	474	61	367	46	3,843	11	63	79	*	50
ELEM/SEC. SCHOOLS	2,015	42	*	29	13	435	38	341	56	611	146	656	75	*	50
HOSPITALS/CLINICS	8,587	1,379	890	402	87	1,935	337	1,278	320	225	194	4,244	465	*	145
NONPROFIT ORGS	10,188	5,004	2,494	2,011	499	3,237	1,782	1,096	359	179	301	395	860	*	212
FEDERAL GOVT	21,353	10,843	4,721	5,209	913	7,660	5,405	1,527	728	150	277	345	1,854	*	224
MILITARY/COMM. CORPS	2,282	637	271	306	60	1,176	521	510	145	118	22	106	155	*	68
STATE GOVT	3,783	1,136	414	547	175	1,673	497	996	180	91	106	309	387	*	81
OTHER GOVT	1,545	230	24	130	76	644	75	447	122	50	81	253	265	*	22
OTHER	584	212	30	168	14	137	46	56	35	3	72	30	117	*	13
NOT EMPLOYED	19,030	*	*	*	*	*	*	*	*	*	*	*	*	19,030	*
NO REPORT	1,350	63	31	27	5	32	18	12	2	48	*	2	14	*	1,191
PHYSICAL SCIENTISTS															
TOTAL	62,055	24,817	12,165	10,109	2,543	13,152	8,467	3,394	1,291	14,693	410	1,078	2,362	4,605	938
BUSINESS/INDUSTRY	22,980	12,109	2,853	7,263	1,993	8,045	5,849	1,616	580	34	338	897	1,280	*	277
EDUCATIONAL INSTITUTIONS	27,081	8,792	7,070	1,396	326	2,837	1,051	1,300	486	14,587	28	89	447	*	301
4-YR. COLL./UNIV	25,544	8,785	7,068	1,396	321	2,713	1,051	1,178	484	13,205	24	80	436	*	301
2-YR. COLLEGES	1,297	7	2	*	5	87	*	85	2	1,199	4	*	*	*	*
ELEM/SEC. SCHOOLS	240	*	*	*	*	37	*	37	*	183	*	9	11	*	*
HOSPITALS/CLINICS	542	195	104	80	11	196	20	118	58	22	12	49	57	*	11
NONPROFIT ORGS	2,031	1,253	802	381	70	537	371	101	65	10	*	15	190	*	26
FEDERAL GOVT	3,941	2,290	1,274	895	121	1,284	1,042	151	91	27	26	23	260	*	31
MILITARY/COMM. CORPS	275	110	35	64	11	116	74	42	*	13	*	*	16	*	20
STATE GOVT	213	28	18	10	*	95	37	52	6	*	*	*	86	*	6
OTHER GOVT	63	20	*	9	11	10	*	5	5	*	*	5	28	*	*
OTHER	28	*	*	*	*	14	5	9	*	*	6	*	*	*	8
NOT EMPLOYED	4,605	*	*	*	*	*	*	*	*	*	*	*	*	4,605	*
NO REPORT	296	20	9	11	*	18	18	*	*	*	*	*	*	*	258
CHEMISTS															
TOTAL	40,650	15,546	7,008	6,774	1,764	9,560	6,242	2,422	896	8,647	248	822	1,796	3,336	695
BUSINESS/INDUSTRY	18,664	9,316	2,101	5,612	1,603	7,048	5,121	1,416	511	27	227	718	1,074	*	254
EDUCATIONAL INSTITUTIONS	14,792	4,346	3,796	476	74	1,366	394	744	228	8,575	10	60	245	*	190
4-YR. COLL./UNIV	13,698	4,341	3,796	476	69	1,281	394	659	228	7,584	6	51	245	*	190
2-YR. COLLEGES	893	5	*	*	5	55	*	55	*	829	4	*	*	*	*
ELEM/SEC. SCHOOLS	201	*	*	*	*	30	*	30	*	162	*	9	*	*	*
HOSPITALS/CLINICS	446	191	104	76	11	157	20	92	45	22	5	19	49	*	3
NONPROFIT ORGS	1,048	508	319	163	26	321	196	75	50	10	*	14	169	*	26
FEDERAL GOVT	1,810	1,076	639	409	28	520	428	41	51	*	*	11	183	*	20
MILITARY/COMM. CORPS	118	52	22	19	11	40	40	*	*	13	*	*	*	*	13
STATE GOVT	184	28	18	10	*	95	37	52	6	*	*	*	55	*	6
OTHER GOVT	48	20	*	9	11	7	*	2	5	*	*	*	21	*	*
OTHER	14	*	*	*	*	*	*	*	*	*	6	*	*	*	8
NOT EMPLOYED	3,336	*	*	*	*	*	*	*	*	*	*	*	*	3,336	*
NO REPORT	190	9	9	*	*	6	6	*	*	*	*	*	*	*	175
PHYSICISTS/ASTRONOMERS															
TOTAL	21,405	9,271	5,157	3,335	779	3,592	2,225	972	395	6,046	162	256	566	1,269	243
BUSINESS/INDUSTRY	4,316	2,793	752	1,651	390	997	728	200	69	7	111	179	206	*	23
EDUCATIONAL INSTITUTIONS	12,289	4,446	3,274	920	252	1,471	657	556	258	6,012	18	29	202	*	111
4-YR. COLL./UNIV	11,846	4,444	3,272	920	252	1,432	657	519	256	5,621	18	29	191	*	111
2-YR. COLLEGES	404	2	2	*	*	32	*	30	2	370	*	*	*	*	*
ELEM/SEC. SCHOOLS	39	*	*	*	*	7	*	7	*	21	*	*	11	*	*
HOSPITALS/CLINICS	96	4	*	4	*	39	*	26	13	*	7	30	8	*	8
NONPROFIT ORGS	983	745	483	218	44	216	175	26	15	*	*	1	21	*	*
FEDERAL GOVT	2,131	1,214	635	486	93	764	614	110	40	27	26	12	77	*	11
MILITARY/COMM. CORPS	157	58	13	45	*	76	34	42	*	*	*	*	16	*	7
STATE GOVT	29	*	*	*	*	*	*	*	*	*	*	*	29	*	*
OTHER GOVT	15	*	*	*	*	3	*	3	*	*	*	5	7	*	*
OTHER	14	*	*	*	*	14	5	9	*	*	*	*	*	*	*
NOT EMPLOYED	1,269	*	*	*	*	*	*	*	*	*	*	*	*	1,269	*
NO REPORT	106	11	*	11	*	12	12	*	*	*	*	*	*	*	83
MATHEMATICAL SCIENTISTS															
TOTAL	15,406	3,294	1,823	1,080	391	1,382	288	802	292	9,076	145	78	407	833	191
BUSINESS/INDUSTRY	1,282	757	79	498	180	207	65	110	32	19	110	60	117	*	12
EDUCATIONAL INSTITUTIONS	12,228	1,976	1,645	286	45	928	62	652	214	9,032	14	4	198	*	76
4-YR. COLL./UNIV	11,774	1,962	1,645	274	43	923	62	650	211	8,623	14	4	190	*	58
2-YR. COLLEGES	360	14	*	12	2	3	*	*	3	325	*	*	8	*	10
ELEM/SEC. SCHOOLS	94	*	*	*	*	2	*	2	*	84	*	*	*	*	8
HOSPITALS/CLINICS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NONPROFIT ORGS	261	137	40	86	11	49	37	12	*	4	21	*	45	*	5
FEDERAL GOVT	593	380	46	198	136	160	113	15	32	13	*	14	26	*	*
MILITARY/COMM. CORPS	50	28	11	*	17	13	*	13	*	*	*	*	*	*	9
STATE GOVT	23	2	*	*	2	14	*	*	14	*	*	*	7	*	*
OTHER GOVT	28	14	2	12	*	*	*	*	*	*	*	*	14	*	*
OTHER	11	*	*	*	*	11	11	*	*	*	*	*	*	*	*
NOT EMPLOYED	833	*	*	*	*	*	*	*	*	*	*	*	*	833	*
NO REPORT	97	*	*	*	*	*	*	*	*	8	*	*	*	*	89
MATHEMATICIANS															
TOTAL	13,665	2,842	1,679	863	300	1,145	207	715	223	8,187	78	78	344	805	186
BUSINESS/INDUSTRY	996	566	49	402	115	169	45	92	32	19	66	60	104	*	12
EDUCATIONAL INSTITUTIONS	11,018	1,827	1,531	251	45	799	35	596	168	8,143	12	4	162	*	71
4-YR. COLL./UNIV	10,566	1,813	1,531	239	43	794	35	594	165	7,736	12	4	154	*	53
2-YR. COLLEGES	358	14	*	12	2	3	*	*	3	323	*	*	8	*	10
ELEM/SEC. SCHOOLS	94	*	*	*	*	2	*	2	*	84	*	*	*	*	8
HOSPITALS/CLINICS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NONPROFIT ORGS	221	118	40	67	11	49	37	12	*	4	*	*	45	*	5
FEDERAL GOVT	438	287	46	131	110	112	90	2	20	13	*	14	12	*	*
MILITARY/COMM. CORPS	50	28	11	*	17	13	*	13	*	*	*	*	*	*	9
STATE GOVT	12	2	*	*	2	3	*	*	3	*	*	*	7	*	*
OTHER GOVT	28	14	2	12	*	*	*	*	*	*	*	*	14	*	*
OTHER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NOT EMPLOYED	805	*	*	*	*	*	*	*	*	*	*	*	*	805	*
NO REPORT	97	*	*	*	*	*	*	*	*	8	*	*	*	*	89

* NO CASES REPORTED

TABLE B-9. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, TYPE OF EMPLOYER, AND PRIMARY WORK ACTIVITY: 1977
CONTINUED

FIELD AND TYPE OF EMPLOYER	TOTAL	RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
		TOTAL	BASIC RE-SEARCH	APPL'D RE-SEARCH	DEVEL-OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH-ING	CON-SULT-ING	SALES/ PROF. SER-VICES	OTHER	NOT EM-PLOYED	NO REPORT
STATISTICIANS															
TOTAL....................	1,741	452	144	217	91	237	81	87	69	889	67	*	63	28	5
BUSINESS/INDUSTRY........	286	191	30	96	65	38	20	18	*	*	44	*	13	*	*
EDUCATIONAL INSTITUTIONS	1,210	149	114	35	*	129	27	56	46	889	2	*	36	*	5
4-YR. COLL./UNIV......	1,208	149	114	35	*	129	27	56	46	887	2	*	36	*	5
2-YR. COLLEGES.........	2	*	*	*	*	*	*	*	*	2	*	*	*	*	*
ELEM/SEC. SCHOOLS.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HOSPITALS/CLINICS.......	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NONPROFIT ORGS..........	40	19	*	19	*	*	*	*	*	*	21	*	*	*	*
FEDERAL GOVT............	155	93	*	67	26	48	23	13	12	*	*	*	14	*	*
MILITARY/COMM. CORPS....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
STATE GOVT..............	11	*	*	*	*	11	*	*	11	*	*	*	*	*	*
OTHER GOVT..............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OTHER...................	11	*	*	*	*	11	11	*	*	*	*	*	*	*	*
NOT EMPLOYED............	28	*	*	*	*	*	*	*	*	*	*	*	*	28	*
NO REPORT...............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
COMPUTER SPECIALISTS															
TOTAL....................	5,822	2,599	283	494	1,822	1,402	735	466	201	1,192	155	65	216	55	138
BUSINESS/INDUSTRY........	3,058	1,854	105	300	1,449	732	439	218	75	28	149	65	154	*	76
EDUCATIONAL INSTITUTIONS	2,128	481	166	127	188	392	130	188	74	1,164	6	*	44	*	41
4-YR. COLL./UNIV......	2,118	481	166	127	188	392	130	188	74	1,154	6	*	44	*	41
2-YR. COLLEGES.........	10	*	*	*	*	*	*	*	*	10	*	*	*	*	*
ELEM/SEC. SCHOOLS.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HOSPITALS/CLINICS.......	12	2	*	*	2	10	*	10	*	*	*	*	*	*	*
NONPROFIT ORGS..........	159	72	12	34	26	69	34	19	16	*	*	*	9	*	9
FEDERAL GOVT............	251	110	*	19	91	120	101	10	9	*	*	*	9	*	12
MILITARY/COMM. CORPS....	78	14	*	14	*	64	16	21	27	*	*	*	*	*	*
STATE GOVT..............	69	54	*	*	54	15	15	*	*	*	*	*	*	*	*
OTHER GOVT..............	12	12	*	*	12	*	*	*	*	*	*	*	*	*	*
OTHER...................	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NOT EMPLOYED............	55	*	*	*	*	*	*	*	*	*	*	*	*	55	*
NO REPORT...............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ENVIRONMENTAL SCIENTISTS															
TOTAL....................	13,543	4,884	2,503	2,172	209	3,095	1,631	1,125	339	3,518	364	137	778	517	250
BUSINESS/INDUSTRY........	3,103	1,240	246	872	122	1,007	456	460	91	3	302	119	386	*	46
EDUCATIONAL INSTITUTIONS	6,312	1,797	1,279	497	21	743	387	247	109	3,504	20	13	113	*	122
4-YR. COLL./UNIV......	6,147	1,796	1,278	497	21	743	387	247	109	3,341	20	13	112	*	122
2-YR. COLLEGES.........	125	1	1	*	*	*	*	*	*	124	*	*	*	*	*
ELEM/SEC. SCHOOLS.....	40	*	*	*	*	*	*	*	*	39	*	*	1	*	*
HOSPITALS/CLINICS.......	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NONPROFIT ORGS..........	520	275	149	121	5	203	97	86	20	10	6	*	20	*	6
FEDERAL GOVT............	2,415	1,335	722	575	38	824	611	162	51	*	20	5	204	*	27
MILITARY/COMM. CORPS....	108	24	10	*	14	84	12	48	24	*	*	*	*	*	*
STATE GOVT..............	424	192	97	86	9	181	60	86	35	1	16	*	33	*	1
OTHER GOVT..............	82	21	*	21	*	45	*	36	9	*	*	*	16	*	*
OTHER...................	14	*	*	*	*	8	8	*	*	*	*	*	6	*	*
NOT EMPLOYED............	517	*	*	*	*	*	*	*	*	*	*	*	*	517	*
NO REPORT...............	48	*	*	*	*	*	*	*	*	*	*	*	*	*	48
EARTH SCIENTISTS															
TOTAL....................	10,235	3,175	1,440	1,591	144	2,330	1,115	931	284	2,988	294	120	637	470	221
BUSINESS/INDUSTRY........	2,700	1,063	209	760	94	922	413	431	78	3	246	102	320	*	44
EDUCATIONAL INSTITUTIONS	4,641	939	591	338	10	537	222	206	109	2,974	14	13	69	*	95
4-YR. COLL./UNIV......	4,507	939	591	338	10	537	222	206	109	2,841	14	13	68	*	95
2-YR. COLLEGES.........	112	*	*	*	*	*	*	*	*	112	*	*	*	*	*
ELEM/SEC. SCHOOLS.....	22	*	*	*	*	*	*	*	*	21	*	*	1	*	*
HOSPITALS/CLINICS.......	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NONPROFIT ORGS..........	296	132	83	46	3	135	60	61	14	10	*	*	13	*	6
FEDERAL GOVT............	1,634	888	492	368	28	505	360	118	27	*	[illegible]	5	191	*	27
MILITARY/COMM. CORPS....	25	*	*	*	*	25	*	13	12	*	*	*	*	*	*
STATE GOVT..............	331	132	65	58	9	159	58	66	35	1	16	*	22	*	1
OTHER GOVT..............	82	21	*	21	*	45	*	36	9	*	*	*	16	*	*
OTHER...................	8	*	*	*	*	2	2	*	*	*	*	*	6	*	*
NOT EMPLOYED............	470	*	*	*	*	*	*	*	*	*	*	*	*	470	*
NO REPORT...............	48	*	*	*	*	*	*	*	*	*	*	*	*	*	48
OCEANOGRAPHERS															
TOTAL....................	1,592	789	605	173	11	400	271	101	28	253	29	5	79	29	8
BUSINESS/INDUSTRY........	135	29	2	16	11	40	21	19	*	*	21	5	40	*	*
EDUCATIONAL INSTITUTIONS	971	526	467	59	*	153	135	18	*	253	*	*	31	*	8
4-YR. COLL./UNIV......	940	525	466	59	*	153	135	18	*	223	*	*	31	*	8
2-YR. COLLEGES.........	13	1	1	*	*	*	*	*	*	12	*	*	*	*	*
ELEM/SEC. SCHOOLS.....	18	*	*	*	*	*	*	*	*	18	*	*	*	*	*
HOSPITALS/CLINICS.......	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NONPROFIT ORGS..........	56	13	*	13	*	37	6	25	6	*	6	*	*	*	*
FEDERAL GOVT............	287	175	118	57	*	110	91	9	10	*	2	*	*	*	*
MILITARY/COMM. CORPS....	45	*	*	*	*	45	12	21	12	*	*	*	*	*	*
STATE GOVT..............	63	46	18	28	*	9	*	9	*	*	*	*	8	*	*
OTHER GOVT..............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OTHER...................	6	*	*	*	*	6	6	*	*	*	*	*	*	*	*
NOT EMPLOYED............	29	*	*	*	*	*	*	*	*	*	*	*	*	29	*
NO REPORT...............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ATMOSPHERIC SCIENTISTS															
TOTAL....................	1,716	920	458	408	54	365	245	93	27	277	41	12	62	18	21
BUSINESS/INDUSTRY........	268	148	35	96	17	45	22	10	13	*	35	12	26	*	2
EDUCATIONAL INSTITUTIONS	700	332	221	100	11	53	30	23	*	277	6	*	13	*	19
4-YR. COLL./UNIV......	700	332	221	100	11	53	30	23	*	277	6	*	13	*	19
2-YR. COLLEGES.........	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ELEM/SEC. SCHOOLS.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HOSPITALS/CLINICS.......	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NONPROFIT ORGS..........	168	130	66	62	2	31	31	*	*	*	*	*	7	*	*
FEDERAL GOVT............	494	272	112	150	10	209	160	35	14	*	*	*	13	*	*
MILITARY/COMM. CORPS....	38	24	10	*	14	14	*	14	*	*	*	*	*	*	*
STATE GOVT..............	30	14	14	*	*	13	2	11	*	*	*	*	3	*	*
OTHER GOVT..............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OTHER...................	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NOT EMPLOYED............	18	*	*	*	*	*	*	*	*	*	*	*	*	18	*
NO REPORT...............	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* NO CASES REPORTED

TABLE B-9. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, TYPE OF EMPLOYER, AND PRIMARY WORK ACTIVITY: 1977
CONTINUED

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
FIELD AND TYPE OF EMPLOYER	TOTAL	TOTAL	BASIC RE- SEARCH	APPL'D RE- SEARCH	DEVEL- OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH- ING	CON- SULT- ING	SALES/ PROF. SER- VICES	OTHER	NOT EM- PLOYED	NO REPORT
ENGINEERS TOTAL....................	46,539	17,182	1,659	8,653	6,870	14,540	8,648	4,258	1,634	8,813	1,613	665	1,621	1,493	612
BUSINESS/INDUSTRY........	22,870	11,200	415	4,932	5,853	8,452	5,404	2,260	788	25	1,429	591	950	*	223
EDUCATIONAL INSTITUTIONS	15,911	3,538	1,000	2,168	370	3,171	1,175	1,352	644	8,711	54	39	212	*	186
4-YR. COLL./UNIV......	15,709	3,538	1,000	2,168	370	3,096	1,162	1,302	632	8,598	54	39	198	*	186
2-YR. COLLEGES.........	185	*	*	*	*	75	13	50	12	96	*	*	14	*	*
ELEM/SEC. SCHOOLS.....	17	*	*	*	*	*	*	*	*	17	*	*	*	*	*
HOSPITALS/CLINICS........	21	*	*	*	*	14	8	6	*	*	*	*	7	*	*
NONPROFIT ORGS...........	1,551	781	63	467	251	541	442	68	31	10	77	12	77	*	53
FEDERAL GOVT.............	3,519	1,458	181	944	333	1,740	1,344	269	127	4	41	*	238	*	38
MILITARY/COMM. CORPS....	686	93	*	81	12	448	238	194	16	63	12	*	36	*	34
STATE GOVT...............	270	78	*	42	36	107	14	65	28	*	*	21	64	*	*
OTHER GOVT...............	114	31	*	19	12	44	11	33	*	*	*	2	37	*	*
OTHER....................	23	*	*	*	*	23	12	11	*	*	*	*	*	*	*
NOT EMPLOYED.............	1,493	*	*	*	*	*	*	*	*	*	*	*	*	1,493	*
NO REPORT................	81	3	*	*	3	*	*	*	*	*	*	*	*	*	78
LIFE SCIENTISTS TOTAL....................	78,335	29,578	19,998	8,660	920	13,674	7,489	4,368	1,817	18,991	1,185	3,039	3,815	6,411	1,642
BUSINESS/INDUSTRY........	10,064	2,795	733	1,568	494	4,182	3,120	876	186	27	677	1,183	915	*	285
EDUCATIONAL INSTITUTIONS	47,471	19,441	14,733	4,549	159	5,436	2,089	2,162	1,185	18,738	339	1,068	1,645	*	804
4-YR. COLL./UNIV......	46,267	19,415	14,717	4,539	159	5,302	2,083	2,036	1,183	17,708	339	1,060	1,645	*	798
2-YR. COLLEGES.........	1,074	26	16	10	*	109	6	101	2	933	*	*	*	*	6
ELEM/SEC. SCHOOLS.....	130	*	*	*	*	25	*	25	*	97	*	8	*	*	*
HOSPITALS/CLINICS........	2,539	973	723	233	17	528	160	324	44	80	17	618	258	*	65
NONPROFIT ORGS...........	2,442	1,480	1,181	233	66	577	280	218	79	43	41	13	241	*	47
FEDERAL GOVT.............	6,760	3,996	2,193	1,691	112	2,072	1,535	347	190	17	37	34	548	*	56
MILITARY/COMM. CORPS....	739	338	205	127	6	270	129	85	56	12	10	67	37	*	5
STATE GOVT...............	1,155	500	209	230	61	444	158	245	41	43	31	37	88	*	12
OTHER GOVT...............	306	26	18	3	5	165	18	111	36	17	9	19	57	*	13
OTHER....................	63	14	*	14	*	*	*	*	*	*	24	*	22	*	3
NOT EMPLOYED.............	6,411	*	*	*	*	*	*	*	*	*	*	*	*	6,411	*
NO REPORT................	385	15	3	12	*	*	*	*	*	14	*	*	4	*	352
BIOLOGICAL SCIENTISTS TOTAL....................	46,788	19,187	15,678	3,117	392	6,009	3,129	2,017	863	13,498	425	462	1,688	4,627	892
BUSINESS/INDUSTRY........	4,011	1,328	504	625	199	1,689	1,278	327	84	23	246	231	421	*	73
EDUCATIONAL INSTITUTIONS	30,829	13,171	11,700	1,398	73	2,802	970	1,223	609	13,329	142	129	761	*	495
4-YR. COLL./UNIV......	29,849	13,166	11,695	1,398	73	2,703	970	1,126	607	12,461	142	121	761	*	495
2-YR. COLLEGES.........	852	5	5	*	*	74	*	72	2	773	*	*	*	*	*
ELEM/SEC. SCHOOLS.....	128	*	*	*	*	25	*	25	*	95	*	8	*	*	*
HOSPITALS/CLINICS........	1,124	697	570	122	5	187	47	105	35	42	2	61	119	*	16
NONPROFIT ORGS...........	1,686	1,182	988	141	53	299	163	111	25	40	2	*	139	*	24
FEDERAL GOVT.............	3,367	2,305	1,599	681	25	778	582	108	88	17	31	15	196	*	25
MILITARY/COMM. CORPS....	334	231	141	90	*	73	32	31	10	*	*	*	25	*	5
STATE GOVT...............	446	239	160	45	34	147	51	84	12	16	*	14	23	*	7
OTHER GOVT...............	89	19	13	3	3	34	6	28	*	17	2	12	*	*	5
OTHER....................	3	*	*	*	*	*	*	*	*	*	*	*	*	*	3
NOT EMPLOYED.............	4,627	*	*	*	*	*	*	*	*	*	*	*	*	4,627	*
NO REPORT................	272	15	3	12	*	*	*	*	*	14	*	*	4	*	239
AGRICULTURAL SCIENTISTS TOTAL....................	15,062	5,542	1,296	3,972	274	3,341	2,120	861	360	2,822	463	510	1,300	769	315
BUSINESS/INDUSTRY........	2,858	676	25	491	160	1,166	771	351	44	*	290	292	322	*	112
EDUCATIONAL INSTITUTIONS	8,331	3,242	789	2,416	37	1,191	663	293	235	2,800	138	190	617	*	153
4-YR. COLL./UNIV......	8,175	3,221	778	2,406	37	1,174	663	276	235	2,688	138	190	617	*	147
2-YR. COLLEGES.........	154	21	11	10	*	17	*	17	*	110	*	*	*	*	6
ELEM/SEC. SCHOOLS.....	2	*	*	*	*	*	*	*	*	2	*	*	*	*	*
HOSPITALS/CLINICS........	11	11	11	*	*	*	*	*	*	*	*	*	*	*	*
NONPROFIT ORGS...........	185	39	15	24	*	95	36	51	8	*	11	6	23	*	11
FEDERAL GOVT.............	2,496	1,415	439	919	57	783	596	124	63	*	*	8	281	*	9
MILITARY/COMM. CORPS....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
STATE GOVT...............	310	145	17	108	20	94	54	30	10	22	6	14	29	*	*
OTHER GOVT...............	20	*	*	*	*	12	*	12	*	*	*	*	6	*	2
OTHER....................	54	14	*	14	*	*	*	*	*	*	18	*	22	*	*
NOT EMPLOYED.............	769	*	*	*	*	*	*	*	*	*	*	*	*	769	*
NO REPORT................	28	*	*	*	*	*	*	*	*	*	*	*	*	*	28
MEDICAL SCIENTISTS TOTAL....................	16,485	4,849	3,024	1,571	254	4,324	2,240	1,490	594	2,671	297	2,067	827	1,015	435
BUSINESS/INDUSTRY........	3,195	791	204	452	135	1,327	1,071	198	58	4	141	660	172	*	100
EDUCATIONAL INSTITUTIONS	8,311	3,028	2,244	735	49	1,443	456	646	341	2,609	59	749	267	*	156
4-YR. COLL./UNIV......	8,243	3,028	2,244	735	49	1,425	450	634	341	2,559	59	749	267	*	156
2-YR. COLLEGES.........	68	*	*	*	*	18	6	12	*	50	*	*	*	*	*
ELEM/SEC. SCHOOLS.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HOSPITALS/CLINICS........	1,404	265	142	111	12	341	113	219	9	38	15	557	139	*	49
NONPROFIT ORGS...........	571	259	178	68	13	183	81	56	46	3	28	7	79	*	12
FEDERAL GOVT.............	897	276	155	91	30	511	357	115	39	*	6	11	71	*	22
MILITARY/COMM. CORPS....	405	107	64	37	6	197	97	54	46	12	10	67	12	*	*
STATE GOVT...............	399	116	32	77	7	203	53	131	19	5	25	9	36	*	5
OTHER GOVT...............	197	7	5	*	2	119	12	71	36	*	7	7	51	*	6
OTHER....................	6	*	*	*	*	*	*	*	*	*	6	*	*	*	*
NOT EMPLOYED.............	1,015	*	*	*	*	*	*	*	*	*	*	*	*	1,015	*
NO REPORT................	85	*	*	*	*	*	*	*	*	*	*	*	*	*	85
PSYCHOLOGISTS............. TOTAL....................	35,718	4,026	1,948	1,765	313	5,920	1,625	3,467	828	10,836	1,481	9,585	1,175	1,994	701
BUSINESS/INDUSTRY........	5,525	516	97	383	36	684	328	278	78	85	787	3,113	192	*	148
EDUCATIONAL INSTITUTIONS	18,572	2,489	1,589	756	144	2,476	530	1,597	349	10,469	319	1,938	605	*	276
4-YR. COLL./UNIV......	16,632	2,448	1,577	731	140	2,082	481	1,301	300	9,933	179	1,242	533	*	215
2-YR. COLLEGES.........	675	17	12	3	2	51	14	29	8	489	7	63	29	*	19
ELEM/SEC. SCHOOLS.....	1,265	24	*	22	2	343	35	267	41	47	133	633	43	*	42
HOSPITALS/CLINICS........	5,386	180	63	66	51	1,164	142	804	218	123	165	3,560	130	*	64
NONPROFIT ORGS...........	1,262	221	35	159	27	444	162	229	53	70	75	347	77	*	28
FEDERAL GOVT.............	1,231	410	62	312	36	504	331	100	73	21	37	149	91	*	19
MILITARY/COMM. CORPS....	190	30	10	20	*	85	39	24	22	19	*	39	17	*	*
STATE GOVT...............	828	134	73	48	13	351	65	270	16	28	25	236	42	*	12
OTHER GOVT...............	515	23	*	17	6	210	28	165	17	21	62	173	21	*	5
OTHER....................	41	*	*	*	*	*	*	*	*	*	11	30	*	*	*
NOT EMPLOYED.............	1,994	*	*	*	*	*	*	*	*	*	*	*	*	1,994	*
NO REPORT................	174	23	19	4	*	2	*	*	2	*	*	*	*	*	149

* NO CASES REPORTED

TABLE B-9. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, TYPE OF EMPLOYER, AND PRIMARY WORK ACTIVITY: 1977
CONTINUED

FIELD AND TYPE OF EMPLOYER	TOTAL	RESEARCH AND DEVELOPMENT TOTAL	BASIC RE-SEARCH	APPL'D RE-SEARCH	DEVEL-OPMENT	....MANAGEMENT OR ADMIN.... TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH-ING	CON-SULT-ING	SALES/PROF. SER-VICES	OTHER	NOT EM-PLOYED	NO REPORT
SOCIAL SCIENTISTS															
TOTAL....................	45,849	7,080	3,166	3,480	434	7,299	1,850	4,270	1,179	23,273	788	536	2,411	3,122	1,340
BUSINESS/INDUSTRY.......	2,582	868	103	721	44	625	256	331	38	21	341	208	395	*	124
EDUCATIONAL INSTITUTIONS	33,398	4,103	2,557	1,297	249	4,053	711	2,581	761	23,081	175	112	1,015	*	859
4-YR. COLL./UNIV......	32,261	4,036	2,546	1,267	223	3,876	680	2,469	727	22,270	162	106	967	*	844
2-YR. COLLEGES........	908	49	11	23	15	149	28	102	19	667	*	*	28	*	15
ELEM/SEC. SCHOOLS.....	229	18	*	7	11	28	3	10	15	144	13	6	20	*	*
HOSPITALS/CLINICS.......	87	29	*	23	6	23	7	16	*	*	*	17	13	*	5
NONPROFIT ORGS..........	1,962	785	212	530	43	817	359	363	95	32	81	8	201	*	38
FEDERAL GOVT............	2,643	864	243	575	46	956	328	473	155	68	116	120	478	*	41
MILITARY/COMM. CORPS....	156	*	*	*	*	96	13	83	*	11	*	*	49	*	*
STATE GOVT..............	801	148	17	131	*	466	148	278	40	19	34	15	69	*	50
OTHER GOVT..............	425	83	4	49	30	170	18	97	55	12	10	54	92	*	4
OTHER...................	404	198	30	154	14	81	10	36	35	3	31	*	89	*	2
NOT EMPLOYED............	3,122	*	*	*	*	*	*	*	*	*	*	*	*	3,122	*
NO REPORT...............	269	2	*	*	2	12	*	12	*	26	*	2	10	*	217
ECONOMISTS															
TOTAL....................	11,689	2,517	678	1,705	134	1,940	524	1,160	256	5,115	277	146	562	899	233
BUSINESS/INDUSTRY.......	1,385	599	67	522	10	410	137	235	38	4	77	94	155	*	46
EDUCATIONAL INSTITUTIONS	7,496	1,024	486	464	74	990	89	746	155	5,094	93	8	157	*	130
4-YR. COLL./UNIV......	7,423	1,021	483	464	74	979	89	735	155	5,035	93	8	157	*	130
2-YR. COLLEGES........	73	3	3	*	*	11	*	11	*	59	*	*	*	*	*
ELEM/SEC. SCHOOLS.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HOSPITALS/CLINICS.......	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NONPROFIT ORGS..........	427	206	19	187	*	173	131	42	*	*	40	4	4	*	*
FEDERAL GOVT............	950	488	90	362	36	197	93	76	28	*	37	40	186	*	2
MILITARY/COMM. CORPS....	24	*	*	*	*	24	*	24	*	*	*	*	*	*	*
STATE GOVT..............	101	27	*	27	*	72	61	11	*	*	2	*	*	*	*
OTHER GOVT..............	22	2	*	2	*	8	8	*	*	*	*	*	12	*	*
OTHER...................	296	171	16	141	14	54	5	14	35	3	28	*	38	*	2
NOT EMPLOYED............	899	*	*	*	*	*	*	*	*	*	*	*	*	899	*
NO REPORT...............	89	*	*	*	*	12	*	12	*	14	*	*	10	*	53
SOCIOLOGISTS/ANTHRO.															
TOTAL....................	10,352	1,641	978	590	73	1,088	349	569	170	5,945	29	71	414	859	305
BUSINESS/INDUSTRY.......	193	63	2	61	*	14	14	*	*	*	27	29	51	*	9
EDUCATIONAL INSTITUTIONS	8,547	1,264	856	356	52	762	186	434	142	5,910	*	36	320	*	255
4-YR. COLL./UNIV......	8,293	1,263	855	356	52	740	176	424	140	5,695	*	30	310	*	255
2-YR. COLLEGES........	232	1	1	*	*	22	10	10	2	199	*	*	10	*	*
ELEM/SEC. SCHOOLS.....	22	*	*	*	*	*	*	*	*	16	*	6	*	*	*
HOSPITALS/CLINICS.......	14	9	*	3	6	*	*	*	*	*	*	*	*	*	5
NONPROFIT ORGS..........	422	208	88	105	15	171	88	69	14	9	*	4	20	*	10
FEDERAL GOVT............	132	82	23	59	*	38	38	*	*	10	2	*	*	*	*
MILITARY/COMM. CORPS....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
STATE GOVT..............	103	15	9	6	*	80	17	52	11	6	*	*	2	*	*
OTHER GOVT..............	44	*	*	*	*	23	6	14	3	*	*	*	21	*	*
OTHER...................	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NOT EMPLOYED............	859	*	*	*	*	*	*	*	*	*	*	*	*	859	*
NO REPORT...............	38	*	*	*	*	*	*	*	*	10	*	2	*	*	26
OTHER SOCIAL SCIENTISTS															
TOTAL....................	23,808	2,922	1,510	1,185	227	4,271	977	2,541	753	12,213	482	319	1,435	1,364	802
BUSINESS/INDUSTRY.......	1,004	206	34	138	34	201	105	96	*	17	237	85	189	*	69
EDUCATIONAL INSTITUTIONS	17,355	1,815	1,215	477	123	2,301	436	1,401	464	12,077	82	68	538	*	474
4-YR. COLL./UNIV......	16,545	1,752	1,208	447	97	2,157	415	1,310	432	11,540	69	68	500	*	459
2-YR. COLLEGES........	603	45	7	23	15	116	18	81	17	409	*	*	18	*	15
ELEM/SEC. SCHOOLS.....	207	18	*	7	11	28	3	10	15	128	13	*	20	*	*
HOSPITALS/CLINICS.......	73	20	*	20	*	23	7	16	*	*	*	17	13	*	*
NONPROFIT ORGS..........	1,113	371	105	238	28	473	140	252	81	23	41	*	177	*	28
FEDERAL GOVT............	1,561	294	130	154	10	721	197	397	127	58	77	80	292	*	39
MILITARY/COMM. CORPS....	132	*	*	*	*	72	13	59	*	11	*	*	49	*	*
STATE GOVT..............	597	106	8	98	*	314	70	215	29	13	32	15	67	*	50
OTHER GOVT..............	359	81	4	47	30	139	4	83	52	12	10	54	59	*	4
OTHER...................	108	27	14	13	*	27	5	22	*	*	3	*	51	*	*
NOT EMPLOYED............	1,364	*	*	*	*	*	*	*	*	*	*	*	*	1,364	*
NO REPORT...............	142	2	*	*	2	*	*	*	*	2	*	*	*	*	138

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 8-10. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, YEARS OF PROFESSIONAL EXPERIENCE, AND TYPE OF EMPLOYER: 1977

FIELD AND YEARS OF PROFESSIONAL EXPERIENCE	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
ALL FIELDS															
TOTAL	303,267	71,464	163,101	156,452	4,634	2,015	8,587	10,188	21,353	2,282	3,783	1,545	584	19,030	1,350
1 OR LESS YEARS	5,981	1,158	3,127	3,056	55	16	241	275	244	53	54	11	30	749	39
2-4 YEARS	35,455	8,148	18,925	18,116	580	229	1,798	1,335	2,100	363	665	202	54	1,725	140
5-9 YEARS	70,133	17,082	39,318	37,715	1,208	395	2,332	2,298	4,855	435	998	480	159	2,030	146
10-14 YEARS	54,660	13,372	31,500	30,222	870	408	1,344	2,000	3,636	454	691	178	75	1,265	145
15-19 YEARS	38,076	8,997	21,606	20,562	769	275	827	1,044	3,356	431	422	188	86	976	143
20-24 YEARS	32,860	7,972	18,231	17,545	449	237	859	956	2,943	285	352	186	58	860	158
25-29 YEARS	27,343	6,710	14,737	14,105	386	246	585	908	2,247	137	298	103	60	1,386	172
30-34 YEARS	14,873	3,257	7,451	7,209	113	129	261	556	880	41	124	69	20	2,074	140
35-39 YEARS	10,908	2,421	4,543	4,412	78	53	114	339	566	22	67	56	24	2,682	74
40 OR MORE YEARS	7,333	1,042	2,311	2,281	24	6	31	186	294	9	61	34	6	3,296	63
NO REPORT	5,645	1,305	1,352	1,229	102	21	195	291	232	52	51	38	12	1,987	130
PHYSICAL SCIENTISTS															
TOTAL	62,055	22,980	27,081	25,544	1,297	240	542	2,031	3,941	275	213	63	28	4,605	296
1 OR LESS YEARS	1,298	412	598	577	18	3	19	58	67	13	*	*	*	125	6
2-4 YEARS	6,664	2,470	3,014	2,852	154	8	84	303	330	56	31	10	*	335	31
5-9 YEARS	13,170	4,870	6,235	5,688	480	67	136	428	971	81	38	2	6	382	21
10-14 YEARS	11,129	4,103	5,383	5,085	213	85	82	431	752	25	59	11	17	233	33
15-19 YEARS	7,754	2,827	3,853	3,608	216	29	74	236	462	47	36	5	*	186	28
20-24 YEARS	7,014	3,003	2,970	2,877	84	9	49	187	501	12	37	*	*	212	43
25-29 YEARS	5,478	2,305	2,220	2,114	92	14	65	152	441	10	12	*	3	233	37
30-34 YEARS	3,389	1,205	1,271	1,243	17	11	16	110	141	12	*	3	2	592	37
35-39 YEARS	3,218	1,099	923	914	9	*	7	47	148	*	*	21	*	959	14
40 OR MORE YEARS	1,613	252	403	403	*	*	*	19	64	*	*	*	*	856	19
NO REPORT	1,328	434	211	183	14	14	10	60	64	19	*	11	*	492	27
CHEMISTS															
TOTAL	40,650	18,664	14,792	13,698	893	201	446	1,048	1,810	118	184	48	14	3,336	190
1 OR LESS YEARS	888	307	396	379	14	3	19	40	22	13	*	*	*	91	*
2-4 YEARS	4,480	1,942	1,856	1,739	110	7	53	102	162	40	31	3	*	260	31
5-9 YEARS	7,900	3,767	3,096	2,764	293	39	110	168	420	17	34	2	6	259	21
10-14 YEARS	6,846	3,213	2,835	2,578	172	85	76	192	287	*	45	11	8	164	15
15-19 YEARS	4,984	2,377	2,036	1,883	133	20	74	122	177	12	25	5	*	139	17
20-24 YEARS	4,741	2,523	1,659	1,576	75	8	41	139	208	12	37	*	*	113	9
25-29 YEARS	3,703	1,954	1,096	1,017	65	14	52	139	236	*	12	*	*	191	23
30-34 YEARS	2,676	1,054	892	864	17	11	12	76	125	12	*	*	*	471	34
35-39 YEARS	2,348	944	579	570	9	*	7	31	84	*	*	16	*	687	*
40 OR MORE YEARS	1,124	216	220	220	*	*	*	12	45	*	*	*	*	618	13
NO REPORT	960	367	127	108	5	14	2	27	44	12	*	11	*	343	27
PHYSICISTS/ASTRONOMERS															
TOTAL	21,405	4,316	12,289	11,846	404	39	96	983	2,131	157	29	15	14	1,269	106
1 OR LESS YEARS	410	105	202	198	4	*	*	18	45	*	*	*	*	34	6
2-4 YEARS	2,184	528	1,158	1,113	44	1	31	201	168	16	*	7	*	75	*
5-9 YEARS	5,270	1,103	3,139	2,924	187	28	26	260	551	64	4	*	*	123	*
10-14 YEARS	4,283	890	2,548	2,507	41	*	6	239	465	25	14	*	9	69	18
15-19 YEARS	2,770	450	1,817	1,725	83	9	*	114	285	35	11	*	*	47	11
20-24 YEARS	2,273	480	1,311	1,301	9	1	8	48	293	*	*	*	*	99	34
25-29 YEARS	1,775	351	1,124	1,097	27	*	13	13	205	10	*	*	3	42	14
30-34 YEARS	713	151	379	379	*	*	4	34	16	*	*	3	2	121	3
35-39 YEARS	870	155	344	344	*	*	*	16	64	*	*	5	*	272	14
40 OR MORE YEARS	489	36	183	183	*	*	*	7	19	*	*	*	*	238	6
NO REPORT	368	67	84	75	9	*	8	33	20	7	*	*	*	149	*
MATHEMATICAL SCIENTISTS															
TOTAL	15,406	1,282	12,228	11,774	360	94	*	261	593	50	23	28	11	833	97
1 OR LESS YEARS	303	13	267	230	29	8	*	*	*	*	*	*	*	13	10
2-4 YEARS	1,626	233	1,158	1,058	73	27	*	40	113	11	*	*	*	71	*
5-9 YEARS	3,953	308	3,184	3,035	116	33	*	60	199	9	*	14	11	166	2
10-14 YEARS	3,323	237	2,869	2,787	75	7	*	51	69	*	11	*	*	74	12
15-19 YEARS	1,974	165	1,633	1,593	25	15	*	12	75	30	9	*	*	39	11
20-24 YEARS	1,453	95	1,251	1,237	14	*	*	42	47	*	3	*	*	15	*
25-29 YEARS	1,109	115	849	827	22	*	*	28	30	*	*	12	*	54	21
30-34 YEARS	569	28	439	435	*	4	*	*	32	*	*	*	*	70	*
35-39 YEARS	496	43	277	274	3	*	*	24	24	*	*	2	*	107	19
40 OR MORE YEARS	414	11	201	201	*	*	*	*	4	*	*	*	*	183	15
NO REPORT	186	34	100	97	3	*	*	4	*	*	*	*	*	41	7
MATHEMATICIANS															
TOTAL	13,665	996	11,018	10,566	358	94	*	221	438	50	12	28	*	805	97
1 OR LESS YEARS	287	13	251	214	29	8	*	*	*	*	*	*	*	13	10
2-4 YEARS	1,356	173	974	876	71	27	*	40	87	11	*	*	*	71	*
5-9 YEARS	3,537	214	2,940	2,791	116	33	*	38	158	9	*	14	*	162	2
10-14 YEARS	2,946	178	2,605	2,523	75	7	*	42	37	*	*	*	*	72	12
15-19 YEARS	1,791	112	1,520	1,480	25	15	*	12	58	30	9	*	*	39	11
20-24 YEARS	1,250	91	1,070	1,056	14	*	*	42	29	*	3	*	*	15	*
25-29 YEARS	986	107	760	738	22	*	*	26	13	*	*	12	*	47	21
30-34 YEARS	525	28	395	391	*	4	*	*	32	*	*	*	*	70	*
35-39 YEARS	439	35	246	243	3	*	*	17	22	*	*	2	*	98	19
40 OR MORE YEARS	364	11	157	157	*	*	*	*	2	*	*	*	*	179	15
NO REPORT	184	34	100	97	3	*	*	4	*	*	*	*	*	39	7
STATISTICIANS															
TOTAL	1,741	286	1,210	1,208	2	*	*	40	155	*	11	*	11	28	*
1 OR LESS YEARS	16	*	16	16	*	*	*	*	*	*	*	*	*	*	*
2-4 YEARS	270	60	184	182	2	*	*	*	26	*	*	*	*	*	*
5-9 YEARS	416	94	244	244	*	*	*	22	41	*	*	*	11	4	*
10-14 YEARS	377	59	264	264	*	*	*	9	32	*	11	*	*	2	*
15-19 YEARS	183	53	113	113	*	*	*	*	17	*	*	*	*	*	*
20-24 YEARS	203	4	181	181	*	*	*	*	18	*	*	*	*	*	*
25-29 YEARS	123	8	89	89	*	*	*	2	17	*	*	*	*	7	*
30-34 YEARS	44	*	44	44	*	*	*	*	*	*	*	*	*	*	*
35-39 YEARS	57	8	31	31	*	*	*	7	2	*	*	*	*	9	*
40 OR MORE YEARS	50	*	44	44	*	*	*	*	2	*	*	*	*	4	*
NO REPORT	2	*	*	*	*	*	*	*	*	*	*	*	*	2	*

* NO CASES REPORTED

TABLE B-10. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, YEARS OF PROFESSIONAL EXPERIENCE, AND TYPE OF EMPLOYER: 1977 CONTINUED

FIELD AND YEARS OF PROFESSIONAL EXPERIENCE	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
COMPUTER SPECIALISTS															
TOTAL......................	5,822	3,058	2,128	2,118	10	*	12	159	251	78	69	12	*	55	*
1 OR LESS YEARS.........	112	74	16	16	*	*	*	22	*	*	*	*	*	*	*
2-4 YEARS................	862	448	369	362	7	*	*	17	25	*	*	*	*	3	*
5-9 YEARS................	1,630	981	429	429	*	*	12	49	78	34	32	2	*	13	*
10-14 YEARS.............	1,263	607	538	538	*	*	*	52	32	13	7	10	*	4	*
15-19 YEARS.............	642	381	217	217	*	*	*	*	22	*	8	*	*	14	*
20-24 YEARS.............	678	244	276	276	*	*	*	19	85	28	13	*	*	13	*
25-29 YEARS.............	335	171	156	156	*	*	*	*	*	*	*	*	*	8	*
30-34 YEARS.............	155	70	85	85	*	*	*	*	*	*	*	*	*	*	*
35-39 YEARS.............	41	16	25	22	3	*	*	*	*	*	*	*	*	*	*
40 OR MORE YEARS.......	41	31	7	7	*	*	*	*	*	3	*	*	*	*	*
NO REPORT...............	63	35	10	10	*	*	*	*	9	*	9	*	*	*	*
ENVIRONMENTAL SCIENTISTS															
TOTAL......................	13,543	3,103	6,312	6,147	125	40	*	520	2,415	108	424	82	14	517	48
1 OR LESS YEARS.........	236	31	131	131	*	*	*	16	19	*	13	*	*	26	*
2-4 YEARS................	1,632	484	671	653	18	*	*	20	315	14	100	*	*	28	*
5-9 YEARS................	2,975	764	1,557	1,537	20	*	*	81	391	10	73	57	*	33	9
10-14 YEARS.............	2,558	472	1,332	1,276	26	30	*	138	469	20	62	*	6	59	*
15-19 YEARS.............	1,810	422	781	748	33	*	*	79	359	38	96	*	*	27	8
20-24 YEARS.............	1,423	303	748	723	15	10	*	25	262	10	25	25	*	19	6
25-29 YEARS.............	1,286	336	543	540	3	*	*	31	283	12	55	*	*	20	6
30-34 YEARS.............	563	92	234	224	10	*	*	43	127	*	*	*	2	56	9
35-39 YEARS.............	530	111	159	159	*	*	*	50	103	*	*	*	*	97	10
40 OR MORE YEARS.......	345	57	98	98	*	*	*	16	77	*	*	*	6	91	*
NO REPORT...............	185	31	58	58	*	*	*	21	10	4	*	*	*	61	*
EARTH SCIENTISTS															
TOTAL......................	10,235	2,700	4,641	4,507	112	22	*	296	1,634	25	331	82	8	470	48
1 OR LESS YEARS.........	179	29	102	102	*	*	*	14	1	*	13	*	*	20	*
2-4 YEARS................	1,123	418	448	430	18	*	*	3	194	*	54	*	*	6	*
5-9 YEARS................	2,132	650	1,094	1,075	19	*	*	26	228	*	50	57	*	18	9
10-14 YEARS.............	1,804	374	906	880	14	12	*	96	301	9	53	*	6	59	*
15-19 YEARS.............	1,472	386	622	589	33	*	*	37	297	12	83	*	*	27	8
20-24 YEARS.............	1,134	282	583	558	15	10	*	18	176	*	25	25	*	19	6
25-29 YEARS.............	995	305	442	439	3	*	*	6	163	*	53	*	*	20	6
30-34 YEARS.............	467	88	186	176	10	*	*	19	109	*	*	*	2	54	9
35-39 YEARS.............	448	92	118	118	*	*	*	44	87	*	*	*	*	97	10
40 OR MORE YEARS.......	304	45	88	88	*	*	*	12	68	*	*	*	*	91	*
NO REPORT...............	177	31	52	52	*	*	*	21	10	4	*	*	*	59	*
OCEANOGRAPHERS															
TOTAL......................	1,592	135	971	940	13	18	*	56	287	45	63	*	6	29	*
1 OR LESS YEARS.........	49	*	29	29	*	*	*	2	12	*	*	*	*	6	*
2-4 YEARS................	220	39	114	114	*	*	*	*	34	*	29	*	*	4	*
5-9 YEARS................	449	38	275	274	1	*	*	30	69	10	12	*	*	15	*
10-14 YEARS.............	429	30	298	268	12	18	*	4	77	11	9	*	*	*	*
15-19 YEARS.............	162	9	91	91	*	*	*	*	37	12	13	*	*	*	*
20-24 YEARS.............	104	*	72	72	*	*	*	*	32	*	*	*	*	*	*
25-29 YEARS.............	105	11	58	58	*	*	*	4	20	12	*	*	*	*	*
30-34 YEARS.............	26	*	16	16	*	*	*	6	2	*	*	*	*	2	*
35-39 YEARS.............	26	8	8	8	*	*	*	6	4	*	*	*	*	*	*
40 OR MORE YEARS.......	20	*	10	10	*	*	*	4	*	*	*	*	6	*	*
NO REPORT...............	2	*	*	*	*	*	*	*	*	*	*	*	*	2	*
ATMOSPHERIC SCIENTISTS															
TOTAL......................	1,716	268	700	700	*	*	*	168	494	38	30	*	*	18	*
1 OR LESS YEARS.........	8	2	*	*	*	*	*	*	6	*	*	*	*	*	*
2-4 YEARS................	289	27	109	109	*	*	*	17	87	14	17	*	*	18	*
5-9 YEARS................	394	76	188	188	*	*	*	25	94	*	11	*	*	*	*
10-14 YEARS.............	325	68	128	128	*	*	*	38	91	*	*	*	*	*	*
15-19 YEARS.............	176	27	68	68	*	*	*	42	25	14	*	*	*	*	*
20-24 YEARS.............	185	21	93	93	*	*	*	7	54	10	*	*	*	*	*
25-29 YEARS.............	186	20	43	43	*	*	*	21	100	*	2	*	*	*	*
30-34 YEARS.............	70	4	32	32	*	*	*	18	16	*	*	*	*	*	*
35-39 YEARS.............	56	11	33	33	*	*	*	*	12	*	*	*	*	*	*
40 OR MORE YEARS.......	21	12	*	*	*	*	*	*	9	*	*	*	*	*	*
NO REPORT...............	6	*	6	6	*	*	*	*	*	*	*	*	*	*	*
ENGINEERS															
TOTAL......................	46,539	22,870	15,911	15,709	185	17	21	1,551	3,519	686	270	114	23	1,493	81
1 OR LESS YEARS.........	541	303	149	147	2	*	*	12	31	2	1	*	*	43	*
2-4 YEARS................	3,845	2,218	1,116	1,116	*	*	6	117	178	80	20	16	*	94	*
5-9 YEARS................	10,081	5,762	2,763	2,724	39	*	*	296	964	53	73	18	*	139	13
10-14 YEARS.............	9,414	4,711	3,352	3,340	12	*	*	406	598	178	62	32	*	75	*
15-19 YEARS.............	7,213	3,176	2,654	2,550	87	17	13	194	741	217	24	27	*	140	27
20-24 YEARS.............	5,446	2,433	2,117	2,116	1	*	2	141	460	108	44	13	12	103	13
25-29 YEARS.............	4,488	2,038	1,797	1,797	*	*	*	191	295	29	10	8	11	109	*
30-34 YEARS.............	2,503	992	1,054	1,042	12	*	*	118	138	*	29	*	*	163	9
35-39 YEARS.............	1,546	640	577	556	21	*	*	27	62	11	3	*	*	226	*
40 OR MORE YEARS.......	818	300	240	240	*	*	*	3	11	*	*	*	*	261	3
NO REPORT...............	644	297	92	81	11	*	*	46	41	8	4	*	*	140	16
LIFE SCIENTISTS															
TOTAL......................	78,335	10,064	47,471	46,267	1,074	130	2,539	2,442	6,760	739	1,155	306	63	6,411	385
1 OR LESS YEARS.........	2,327	202	1,378	1,373	*	5	110	91	114	26	9	5	*	392	*
2-4 YEARS................	11,036	1,413	6,838	6,644	170	24	506	470	646	150	172	12	22	742	65
5-9 YEARS................	18,089	2,413	11,802	11,524	263	15	651	585	1,347	175	305	77	*	657	77
10-14 YEARS.............	12,311	1,691	8,057	7,858	181	18	418	327	1,016	111	219	42	14	399	17
15-19 YEARS.............	9,068	1,147	5,649	5,486	147	16	227	275	1,261	87	87	35	6	252	42
20-24 YEARS.............	8,307	1,035	5,185	5,061	113	11	190	249	1,146	89	112	34	*	232	35
25-29 YEARS.............	7,031	942	4,251	4,142	106	3	184	212	690	44	119	31	13	508	37
30-34 YEARS.............	3,639	440	1,986	1,949	18	19	66	78	272	29	42	32	*	647	47
35-39 YEARS.............	2,846	315	1,317	1,285	20	12	74	80	124	11	33	12	8	854	18
40 OR MORE YEARS.......	1,995	197	562	556	6	*	18	39	88	6	50	15	*	1,015	5
NO REPORT...............	1,686	269	446	389	50	7	95	36	56	11	7	11	*	713	42

* NO CASES REPORTED

TABLE B-10. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, YEARS OF PROFESSIONAL EXPERIENCE, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND YEARS OF PROFESSIONAL EXPERIENCE	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NON-PROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
BIOLOGICAL SCIENTISTS															
TOTAL	46,788	4,011	30,829	29,849	852	128	1,124	1,686	3,367	334	446	89	3	4,627	272
1 OR LESS YEARS	1,629	104	924	919	*	5	12	78	53	15	9	5	*	229	*
2-4 YEARS	7,075	592	4,823	4,663	136	24	225	346	332	72	95	*	*	537	53
5-9 YEARS	11,491	1,052	8,130	7,894	221	15	302	423	749	80	134	22	*	553	46
10-14 YEARS	7,129	611	5,130	4,958	154	18	226	227	499	61	68	17	*	281	9
15-19 YEARS	5,125	388	3,648	3,506	126	16	81	189	574	21	24	15	*	154	31
20-24 YEARS	4,740	464	3,188	3,091	88	9	100	160	564	32	26	6	*	170	30
25-29 YEARS	3,758	400	2,417	2,347	67	3	57	123	308	26	49	*	*	352	26
30-34 YEARS	2,019	142	1,098	1,061	18	19	29	61	165	5	25	3	*	455	36
35-39 YEARS	1,771	132	842	816	14	12	36	25	65	11	6	6	3	639	6
40 OR MORE YEARS	1,179	47	318	318	*	*	3	28	38	*	6	4	*	730	5
NO REPORT	1,072	79	311	276	28	7	53	26	20	11	4	11	*	527	30
AGRICULTURAL SCIENTISTS															
TOTAL	15,062	2,858	8,331	8,175	154	2	11	185	2,496	*	310	20	54	769	28
1 OR LESS YEARS	217	50	114	114	*	*	*	*	51	*	*	*	*	2	*
2-4 YEARS	1,490	454	677	659	18	*	*	21	246	*	33	2	22	35	*
5-9 YEARS	2,956	709	1,703	1,674	29	*	11	12	413	*	83	*	*	19	6
10-14 YEARS	2,656	532	1,544	1,524	20	*	*	25	386	*	88	12	14	55	*
15-19 YEARS	2,091	391	1,061	1,050	11	*	*	19	555	*	28	*	*	26	11
20-24 YEARS	1,824	194	1,072	1,057	13	2	*	44	447	*	44	*	*	23	*
25-29 YEARS	1,734	185	1,102	1,067	35	*	*	31	274	*	28	6	13	90	5
30-34 YEARS	959	145	598	598	*	*	*	5	69	*	*	*	*	136	6
35-39 YEARS	500	61	231	231	*	*	*	28	23	*	6	*	5	146	*
40 OR MORE YEARS	439	67	170	164	6	*	*	*	20	*	*	*	*	182	*
NO REPORT	196	70	59	37	22	*	*	*	12	*	*	*	*	55	*
MEDICAL SCIENTISTS															
TOTAL	16,485	3,195	8,311	8,243	68	*	1,404	571	897	405	399	197	6	1,015	85
1 OR LESS YEARS	681	48	340	340	*	*	98	13	10	11	*	*	*	161	*
2-4 YEARS	2,471	367	1,338	1,322	16	*	281	103	68	78	44	10	*	170	12
5-9 YEARS	3,642	652	1,969	1,956	13	*	338	150	185	95	88	55	*	85	25
10-14 YEARS	2,526	548	1,383	1,376	7	*	192	75	131	50	63	13	*	63	8
15-19 YEARS	1,852	368	940	930	10	*	146	67	132	66	35	20	6	72	*
20-24 YEARS	1,743	377	925	913	12	*	90	45	135	57	42	28	*	39	5
25-29 YEARS	1,539	357	732	728	4	*	127	58	108	18	42	25	*	66	6
30-34 YEARS	661	153	290	290	*	*	37	12	38	24	17	29	*	56	5
35-39 YEARS	575	122	244	238	6	*	38	27	36	*	21	6	*	69	12
40 OR MORE YEARS	377	83	74	74	*	*	15	11	30	6	44	11	*	103	*
NO REPORT	418	120	76	76	*	*	42	10	24	*	3	*	*	131	12
PSYCHOLOGISTS															
TOTAL	35,718	5,525	18,572	16,632	675	1,265	5,386	1,262	1,231	190	828	515	41	1,994	174
1 OR LESS YEARS	605	74	271	271	*	*	112	36	2	*	31	2	16	60	1
2-4 YEARS	5,088	496	2,484	2,263	70	151	1,175	166	208	28	178	75	*	244	34
5-9 YEARS	8,886	1,451	4,673	4,276	129	268	1,511	257	252	59	202	157	14	286	24
10-14 YEARS	6,078	908	3,521	3,119	201	201	824	241	128	51	160	49	*	169	27
15-19 YEARS	4,104	695	2,292	2,077	60	155	510	109	148	*	91	79	11	165	4
20-24 YEARS	4,049	595	2,215	1,952	79	184	608	173	198	17	58	73	*	97	15
25-29 YEARS	3,378	681	1,709	1,431	85	193	336	90	226	25	43	38	*	200	30
30-34 YEARS	1,432	249	696	603	21	72	179	56	46	*	17	29	*	141	19
35-39 YEARS	708	110	315	274	6	35	33	46	6	*	20	*	*	167	11
40 OR MORE YEARS	665	131	222	216	*	6	13	28	13	*	11	5	*	242	*
NO REPORT	725	135	174	150	24	*	85	60	4	10	17	8	*	223	9
SOCIAL SCIENTISTS															
TOTAL	45,849	2,582	33,398	32,261	908	229	87	1,962	2,643	156	801	425	404	3,122	269
1 OR LESS YEARS	559	49	317	311	6	*	*	40	11	12	*	4	14	90	22
2-4 YEARS	4,702	386	3,275	3,168	88	19	27	202	285	24	164	89	32	208	10
5-9 YEARS	11,349	533	8,675	8,502	161	12	22	542	653	14	275	153	128	354	*
10-14 YEARS	8,584	643	6,448	6,219	162	67	20	354	572	56	111	34	38	252	56
15-19 YEARS	5,511	184	4,527	4,283	201	43	3	139	288	12	71	42	69	153	23
20-24 YEARS	4,490	264	3,469	3,303	143	23	10	120	244	21	60	41	46	169	46
25-29 YEARS	4,238	122	3,212	3,098	78	36	*	204	282	17	59	14	33	254	41
30-34 YEARS	2,623	181	1,686	1,628	35	23	*	151	124	*	36	5	16	405	19
35-39 YEARS	1,523	87	950	928	16	6	*	65	99	*	11	21	16	272	2
40 OR MORE YEARS	1,442	63	578	560	18	*	*	81	37	*	*	14	*	648	21
NO REPORT	828	70	261	261	*	*	5	64	48	*	14	8	12	317	29
ECONOMISTS															
TOTAL	11,689	1,385	7,496	7,423	73	*	*	427	950	24	101	22	296	899	89
1 OR LESS YEARS	107	14	86	86	*	*	*	2	*	*	*	*	*	5	*
2-4 YEARS	1,096	200	621	621	*	*	*	46	146	*	47	*	32	4	*
5-9 YEARS	2,740	295	1,877	1,861	16	*	*	113	284	14	*	12	80	65	*
10-14 YEARS	2,256	314	1,469	1,467	2	*	*	92	246	10	*	3	34	75	13
15-19 YEARS	1,305	97	973	962	11	*	*	15	106	*	*	5	69	37	3
20-24 YEARS	996	126	746	746	*	*	*	11	42	*	14	*	24	22	11
25-29 YEARS	1,078	86	711	701	10	*	*	83	27	*	16	*	26	102	27
30-34 YEARS	790	127	460	448	12	*	*	14	27	*	13	2	16	117	14
35-39 YEARS	572	41	336	326	10	*	*	25	24	*	11	*	13	122	*
40 OR MORE YEARS	517	28	160	148	12	*	*	13	25	*	*	*	*	270	21
NO REPORT	232	57	57	57	*	*	*	13	23	*	*	*	2	80	*
SOCIOLOGISTS/ANTHRO.															
TOTAL	10,352	193	8,547	8,293	232	22	14	422	132	*	103	44	*	859	38
1 OR LESS YEARS	107	*	77	71	6	*	*	14	*	*	*	*	*	16	*
2-4 YEARS	1,109	23	879	840	39	*	*	43	15	*	21	*	*	118	10
5-9 YEARS	2,801	32	2,438	2,413	25	*	6	115	36	*	37	16	*	121	*
10-14 YEARS	1,918	64	1,660	1,590	70	*	*	31	30	*	28	*	*	89	16
15-19 YEARS	1,144	*	1,027	987	34	6	3	53	17	*	*	*	*	42	2
20-24 YEARS	1,105	23	963	900	52	11	*	19	*	*	15	6	*	79	*
25-29 YEARS	899	15	749	744	*	5	*	52	30	*	*	14	*	39	*
30-34 YEARS	531	*	418	418	*	*	*	46	2	*	*	*	*	65	*
35-39 YEARS	277	23	183	177	6	*	*	6	*	*	*	*	*	65	*
40 OR MORE YEARS	295	13	109	109	*	*	*	18	*	*	*	*	*	155	*
NO REPORT	166	*	44	44	*	*	5	25	2	*	2	8	*	70	10

* NO CASES REPORTED

TABLE B-10. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, YEARS OF PROFESSIONAL EXPERIENCE, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND YEARS OF PROFESSIONAL EXPERIENCE	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NON-PROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
OTHER SOCIAL SCIENTISTS															
TOTAL......................	23,808	1,004	17,355	16,545	603	207	73	1,113	1,561	132	597	359	108	1,364	142
1 OR LESS YEARS.........	345	35	154	154	*	*	*	24	11	12	*	4	14	69	22
2-4 YEARS...............	2,497	163	1,775	1,707	49	19	27	113	124	24	96	89	*	86	*
5-9 YEARS...............	5,808	206	4,360	4,228	120	12	16	314	333	*	238	125	48	168	*
10-14 YEARS..............	4,410	265	3,319	3,162	90	67	20	231	296	46	83	31	4	88	27
15-19 YEARS..............	3,062	87	2,527	2,334	156	37	*	71	165	12	71	37	*	74	18
20-24 YEARS..............	2,389	115	1,760	1,657	91	12	10	90	202	21	31	35	22	68	35
25-29 YEARS..............	2,261	21	1,752	1,653	68	31	*	69	225	17	43	*	7	113	14
30-34 YEARS..............	1,302	54	808	762	23	23	*	91	95	*	23	3	*	223	5
35-39 YEARS..............	674	23	431	425	*	6	*	34	75	*	*	21	3	85	2
40 OR MORE YEARS........	630	22	309	303	6	*	*	50	12	*	*	14	*	223	*
NO REPORT...............	430	13	160	160	*	*	*	26	23	*	12	*	10	167	19

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-11. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, YEARS OF PROFESSIONAL EXPERIENCE, AND PRIMARY WORK ACTIVITY: 1977

FIELD AND YEARS OF PROFESSIONAL EXPERIENCE	TOTAL	RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....				TEACHING	CONSULTING	SALES/ PROF. SERVICES	OTHER	NOT EMPLOYED	NO REPORT
		TOTAL	BASIC RESEARCH	APPL'D RESEARCH	DEVELOPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH						
ALL FIELDS															
TOTAL	303,267	93,460	43,545	36,413	13,502	60,464	30,733	22,150	7,581	90,392	6,141	15,183	12,785	19,030	5,812
1 OR LESS YEARS	5,981	2,823	1,806	776	241	367	168	183	16	1,141	15	502	239	749	145
2-4 YEARS	35,455	16,596	9,139	5,369	2,088	2,595	1,465	893	237	8,942	626	2,566	1,748	1,725	657
5-9 YEARS	70,133	26,548	12,093	10,409	4,046	10,337	5,522	3,659	1,156	21,953	1,261	3,835	3,168	2,030	1,001
10-14 YEARS	54,660	16,801	7,538	6,646	2,617	11,376	5,891	4,207	1,278	18,559	1,060	2,632	2,050	1,265	917
15-19 YEARS	38,076	10,304	4,377	4,227	1,700	10,100	5,206	3,693	1,201	12,515	605	1,609	1,321	976	646
20-24 YEARS	32,860	8,139	3,525	3,490	1,124	9,458	4,792	3,436	1,230	10,341	668	1,278	1,482	860	634
25-29 YEARS	27,343	5,910	2,241	2,852	817	8,162	4,023	2,935	1,204	8,029	743	1,449	1,028	1,386	636
30-34 YEARS	14,873	2,708	1,166	1,233	309	3,961	1,796	1,567	598	4,319	354	512	639	2,074	306
35-39 YEARS	10,908	1,856	794	727	335	2,423	1,181	856	386	2,611	372	301	470	2,682	193
40 OR MORE YEARS	7,333	659	315	299	45	953	346	438	169	1,281	330	230	362	3,296	222
NO REPORT	5,645	1,116	551	385	180	732	343	283	106	701	107	269	278	1,987	455
PHYSICAL SCIENTISTS															
TOTAL	62,055	24,817	12,165	10,109	2,543	13,152	8,467	3,394	1,291	14,693	410	1,078	2,362	4,605	938
1 OR LESS YEARS	1,298	881	597	239	45	63	33	30	*	113	1	53	21	125	41
2-4 YEARS	6,664	4,299	2,496	1,482	321	411	311	86	14	1,038	22	73	346	335	140
5-9 YEARS	13,170	6,615	3,217	2,654	744	1,945	1,228	518	199	3,294	43	284	494	382	113
10-14 YEARS	11,129	4,469	2,303	1,719	447	2,450	1,711	528	211	3,285	28	214	340	233	110
15-19 YEARS	7,754	2,629	1,116	1,238	275	2,124	1,281	594	249	2,355	29	87	197	186	147
20-24 YEARS	7,014	2,568	1,072	1,197	299	2,036	1,400	493	143	1,671	63	72	265	212	127
25-29 YEARS	5,478	1,397	555	703	139	1,966	1,226	436	304	1,246	118	206	232	233	80
30-34 YEARS	3,389	804	346	375	83	943	592	289	62	796	20	31	141	592	62
35-39 YEARS	3,218	614	250	276	88	823	498	273	52	562	41	33	152	959	34
40 OR MORE YEARS	1,613	148	58	73	17	203	67	103	33	221	41	24	97	856	23
NO REPORT	1,328	393	155	153	85	188	120	44	24	112	4	1	77	492	61
CHEMISTS															
TOTAL	40,650	15,546	7,008	6,774	1,764	9,560	6,242	2,422	896	8,647	248	822	1,796	3,336	695
1 OR LESS YEARS	888	608	419	173	16	45	20	25	*	68	*	34	19	91	23
2-4 YEARS	4,480	2,718	1,493	993	232	353	274	65	14	726	6	46	241	260	130
5-9 YEARS	7,900	3,741	1,636	1,654	451	1,364	858	357	149	1,862	23	197	363	259	91
10-14 YEARS	6,846	2,647	1,284	1,077	286	1,716	1,262	298	156	1,836	13	170	233	164	67
15-19 YEARS	4,984	1,750	698	840	212	1,441	889	385	167	1,305	22	76	151	139	100
20-24 YEARS	4,741	1,675	566	849	260	1,519	1,032	383	104	1,029	27	58	227	113	93
25-29 YEARS	3,703	989	353	517	119	1,390	880	351	159	652	71	174	170	191	66
30-34 YEARS	2,676	584	212	302	70	815	509	244	62	592	11	27	120	471	56
35-39 YEARS	2,348	429	164	199	66	632	384	210	38	402	41	16	131	687	10
40 OR MORE YEARS	1,124	109	49	49	11	143	38	72	33	108	30	24	75	618	17
NO REPORT	960	296	134	121	41	142	96	32	14	67	4	*	66	343	42
PHYSICISTS/ASTRONOMERS															
TOTAL	21,405	9,271	5,157	3,335	779	3,592	2,225	972	395	6,046	162	256	566	1,269	243
1 OR LESS YEARS	410	273	178	66	29	18	13	5	*	45	1	19	2	34	18
2-4 YEARS	2,184	1,581	1,003	489	89	58	37	21	*	312	16	27	105	75	10
5-9 YEARS	5,270	2,874	1,581	1,000	293	581	370	161	50	1,432	20	87	131	123	22
10-14 YEARS	4,283	1,822	1,019	642	161	734	449	230	55	1,449	15	44	107	69	43
15-19 YEARS	2,770	879	418	398	63	683	392	209	82	1,050	7	11	46	47	47
20-24 YEARS	2,273	893	506	348	39	517	368	110	39	642	36	14	38	99	34
25-29 YEARS	1,775	408	202	186	20	576	346	85	145	594	47	32	62	42	14
30-34 YEARS	713	220	134	73	13	128	83	45	*	204	9	4	21	121	6
35-39 YEARS	870	185	86	77	22	191	114	63	14	160	*	17	21	272	24
40 OR MORE YEARS	489	39	9	24	6	60	29	31	*	113	11	*	22	238	6
NO REPORT	368	97	21	32	44	46	24	12	10	45	*	1	11	149	19
MATHEMATICAL SCIENTISTS															
TOTAL	15,406	3,294	1,823	1,080	391	1,382	288	802	292	9,076	145	78	407	833	191
1 OR LESS YEARS	303	43	37	6	*	*	*	*	*	219	*	*	8	13	20
2-4 YEARS	1,626	499	292	123	84	41	12	20	9	902	49	4	53	71	7
5-9 YEARS	3,953	1,013	622	299	92	179	38	82	59	2,370	51	20	111	166	43
10-14 YEARS	3,323	566	282	230	54	345	75	220	50	2,223	32	8	47	74	28
15-19 YEARS	1,974	461	224	133	104	273	34	185	54	1,117	5	11	44	39	24
20-24 YEARS	1,453	231	141	74	16	218	53	103	62	932	*	15	42	15	*
25-29 YEARS	1,109	228	92	124	12	157	42	75	40	581	*	8	49	54	32
30-34 YEARS	569	91	62	29	*	90	24	58	8	310	*	*	8	70	*
35-39 YEARS	496	96	38	38	20	56	10	36	10	196	*	*	30	107	11
40 OR MORE YEARS	414	28	23	5	*	11	*	11	*	154	8	*	15	183	15
NO REPORT	186	38	10	19	9	12	*	12	*	72	*	12	*	41	11
MATHEMATICIANS															
TOTAL	13,665	2,842	1,679	863	300	1,145	207	715	223	8,187	78	78	344	805	186
1 OR LESS YEARS	287	43	37	6	*	*	*	*	*	206	*	*	5	13	20
2-4 YEARS	1,356	444	286	107	51	34	12	13	9	726	30	4	40	71	7
5-9 YEARS	3,537	830	548	196	86	136	17	71	48	2,220	27	20	99	162	43
10-14 YEARS	2,946	505	268	193	44	283	51	193	39	2,005	13	8	37	72	23
15-19 YEARS	1,791	388	209	109	70	258	19	185	54	1,027	*	11	44	39	24
20-24 YEARS	1,250	209	126	67	16	157	38	82	37	812	*	15	42	15	*
25-29 YEARS	986	207	92	103	12	125	36	61	28	529	*	8	38	47	32
30-34 YEARS	525	79	50	29	*	87	24	58	5	281	*	*	8	70	*
35-39 YEARS	439	79	38	29	12	49	10	36	3	178	*	*	24	98	11
40 OR MORE YEARS	364	20	15	5	*	4	*	4	*	131	8	*	7	179	15
NO REPORT	184	38	10	19	9	12	*	12	*	72	*	12	*	39	11
STATISTICIANS															
TOTAL	1,741	452	144	217	91	237	81	87	69	889	67	*	63	28	5
1 OR LESS YEARS	16	*	*	*	*	*	*	*	*	13	*	*	3	*	*
2-4 YEARS	270	55	6	16	33	7	*	7	*	176	19	*	13	*	*
5-9 YEARS	416	183	74	103	6	43	21	11	11	150	24	*	12	4	*
10-14 YEARS	377	61	14	37	10	62	24	27	11	218	19	*	10	2	5
15-19 YEARS	183	73	15	24	34	15	15	*	*	90	5	*	*	*	*
20-24 YEARS	203	22	15	7	*	61	15	21	25	120	*	*	*	*	*
25-29 YEARS	123	21	*	21	*	32	6	14	12	52	*	*	11	7	*
30-34 YEARS	44	12	12	*	*	3	*	*	3	29	*	*	*	*	*
35-39 YEARS	57	17	*	9	8	7	*	*	7	18	*	*	6	9	*
40 OR MORE YEARS	50	8	8	*	*	7	*	7	*	23	*	*	8	4	*
NO REPORT	2	*	*	*	*	*	*	*	*	*	*	*	*	2	*

* NO CASES REPORTED

TABLE B-11. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, YEARS OF PROFESSIONAL EXPERIENCE, AND PRIMARY WORK ACTIVITY: 1977
CONTINUED

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
FIELD AND YEARS OF PROFESSIONAL EXPERIENCE	TOTAL	TOTAL	BASIC RE- SEARCH	APPL'D RE- SEARCH	DEVEL- OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH- ING	CON- SULT- ING	SALES/ PROF. SER- VICES	OTHER	NOT EM- PLOYED	NO REPORT
COMPUTER SPECIALISTS															
TOTAL......................	5,822	2,599	283	494	1,822	1,402	735	466	201	1,192	155	65	216	55	138
1 OR LESS YEARS........	112	78	4	29	45	12	*	12	*	4	*	11	*	*	7
2-4 YEARS..............	862	455	46	79	330	59	50	*	9	206	44	*	70	3	25
5-9 YEARS..............	1,630	857	97	124	636	362	183	167	12	233	25	*	73	13	67
10-14 YEARS............	1,263	477	74	68	335	342	227	77	38	347	22	22	24	4	25
15-19 YEARS............	642	305	27	43	235	201	79	92	30	97	5	7	3	14	10
20-24 YEARS............	678	225	14	79	132	259	127	77	55	131	20	5	21	13	4
25-29 YEARS............	335	112	14	38	60	111	44	19	48	65	26	6	7	8	*
30-34 YEARS............	155	44	*	24	20	44	22	22	*	67	*	*	*	*	*
35-39 YEARS............	41	3	3	*	*	*	*	*	*	25	13	*	*	*	*
40 OR MORE YEARS.......	41	10	*	*	10	3	3	*	*	7	*	14	7	*	*
NO REPORT..............	63	33	4	10	19	9	*	*	9	10	*	*	11	*	*
ENVIRONMENTAL SCIENTISTS															
TOTAL......................	13,543	4,884	2,503	2,172	209	3,095	1,631	1,125	339	3,518	364	137	778	517	250
1 OR LESS YEARS........	236	124	79	45	*	32	13	19	*	54	*	*	*	26	*
2-4 YEARS..............	1,632	961	481	432	48	119	104	15	*	307	28	22	135	28	32
5-9 YEARS..............	2,975	1,196	584	561	51	560	263	254	43	873	80	32	145	33	56
10-14 YEARS............	2,558	1,036	474	508	54	460	262	164	34	743	51	43	128	59	38
15-19 YEARS............	1,810	487	265	192	30	595	277	221	97	484	72	11	99	27	35
20-24 YEARS............	1,423	438	268	148	22	412	217	159	36	403	36	24	81	19	10
25-29 YEARS............	1,286	314	146	166	2	504	270	161	73	332	28	*	70	20	18
30-34 YEARS............	563	131	80	49	2	152	64	49	39	135	39	*	38	56	12
35-39 YEARS............	530	144	94	50	*	150	86	47	17	85	9	5	23	97	17
40 OR MORE YEARS.......	345	20	20	*	*	98	75	23	*	59	15	*	45	91	17
NO REPORT..............	185	33	12	21	*	13	*	13	*	43	6	*	14	61	15
EARTH SCIENTISTS															
TOTAL......................	10,235	3,175	1,440	1,591	144	2,330	1,115	931	284	2,988	294	120	637	470	221
1 OR LESS YEARS........	179	79	45	34	*	32	13	19	*	48	*	*	*	20	*
2-4 YEARS..............	1,123	588	239	318	31	93	78	15	*	260	20	16	110	6	30
5-9 YEARS..............	2,132	752	304	414	34	371	155	186	30	738	68	32	116	18	37
10-14 YEARS............	1,804	643	227	381	35	314	169	121	24	590	39	42	87	59	30
15-19 YEARS............	1,472	338	201	117	20	487	215	197	75	420	63	11	91	27	35
20-24 YEARS............	1,134	275	136	117	22	357	170	151	36	361	36	14	62	19	10
25-29 YEARS............	995	242	115	127	*	347	141	137	69	288	17	*	63	20	18
30-34 YEARS............	467	93	59	32	2	124	49	42	33	113	33	*	38	54	12
35-39 YEARS............	448	112	82	30	*	123	75	31	17	68	3	5	23	97	17
40 OR MORE YEARS.......	304	20	20	*	*	69	50	19	*	59	15	*	33	91	17
NO REPORT..............	177	33	12	21	*	13	*	13	*	43	*	*	14	59	15
OCEANOGRAPHERS															
TOTAL......................	1,592	789	605	173	11	400	271	101	28	253	29	5	79	29	8
1 OR LESS YEARS........	49	37	32	5	*	*	*	*	*	6	*	*	*	6	*
2-4 YEARS..............	220	161	139	22	*	5	5	*	*	24	*	4	22	4	*
5-9 YEARS..............	449	248	190	58	*	86	59	27	*	70	12	*	18	15	*
10-14 YEARS............	429	188	156	21	11	105	77	28	*	102	*	1	25	*	8
15-19 YEARS............	162	61	26	35	*	69	37	10	22	15	9	*	8	*	*
20-24 YEARS............	104	56	44	12	*	23	23	*	*	19	*	*	6	*	*
25-29 YEARS............	105	26	13	13	*	62	38	24	*	17	*	*	*	*	*
30-34 YEARS............	26	8	1	7	*	14	8	*	6	*	2	*	*	2	*
35-39 YEARS............	26	4	4	*	*	16	8	8	*	*	6	*	*	*	*
40 OR MORE YEARS.......	20	*	*	*	*	20	16	4	*	*	*	*	*	*	*
NO REPORT..............	2	*	*	*	*	*	*	*	*	*	*	*	*	2	*
ATMOSPHERIC SCIENTISTS															
TOTAL......................	1,716	920	458	408	54	365	245	93	27	277	41	12	62	18	21
1 OR LESS YEARS........	8	8	2	6	*	*	*	*	*	*	*	*	*	*	*
2-4 YEARS..............	289	212	103	92	17	21	21	*	*	23	8	2	3	18	2
5-9 YEARS..............	394	196	90	89	17	103	49	41	13	65	*	*	11	*	19
10-14 YEARS............	325	205	91	106	8	41	16	15	10	51	12	*	16	*	*
15-19 YEARS............	176	88	38	40	10	39	25	14	*	49	*	*	*	*	*
20-24 YEARS............	185	107	88	19	*	32	24	8	*	23	*	10	13	*	*
25-29 YEARS............	186	46	18	26	2	95	91	*	4	27	11	*	7	*	*
30-34 YEARS............	70	30	20	10	*	14	7	7	*	22	4	*	*	*	*
35-39 YEARS............	56	28	8	20	*	11	3	8	*	17	*	*	*	*	*
40 OR MORE YEARS.......	21	*	*	*	*	9	9	*	*	*	*	*	12	*	*
NO REPORT..............	6	*	*	*	*	*	*	*	*	*	6	*	*	*	*
ENGINEERS															
TOTAL......................	46,539	17,182	1,659	8,653	6,870	14,540	8,648	4,258	1,634	8,813	1,613	665	1,621	1,493	612
1 OR LESS YEARS........	541	329	50	174	105	81	28	53	*	64	7	2	15	43	*
2-4 YEARS..............	3,845	2,427	246	1,227	954	325	216	81	28	588	127	63	154	94	67
5-9 YEARS..............	10,081	5,106	363	2,758	1,985	2,473	1,643	637	193	1,400	248	208	422	139	85
10-14 YEARS............	9,414	3,588	419	1,608	1,561	3,013	1,752	956	305	1,889	291	182	244	75	132
15-19 YEARS............	7,213	2,223	217	1,114	892	2,787	1,813	726	248	1,526	222	48	196	140	71
20-24 YEARS............	5,446	1,315	92	721	502	2,220	1,277	642	301	1,290	197	52	207	103	62
25-29 YEARS............	4,488	1,202	130	626	446	1,781	962	615	204	948	170	41	178	109	59
30-34 YEARS............	2,503	446	77	175	194	1,001	530	313	158	647	86	33	118	163	9
35-39 YEARS............	1,546	338	24	142	172	527	237	167	123	262	112	12	50	226	19
40 OR MORE YEARS.......	818	69	32	27	10	149	60	42	47	149	108	24	27	261	31
NO REPORT..............	644	139	9	81	49	183	130	26	27	50	45	*	10	140	77
LIFE SCIENTISTS															
TOTAL......................	78,335	29,578	19,998	8,660	920	13,674	7,489	4,368	1,817	18,991	1,185	3,039	3,815	6,411	1,642
1 OR LESS YEARS........	2,327	1,165	930	189	46	129	82	31	16	293	*	204	114	392	30
2-4 YEARS..............	11,036	6,037	4,631	1,211	195	898	593	200	105	1,911	131	514	606	742	197
5-9 YEARS..............	18,089	8,228	5,659	2,224	345	2,290	1,357	665	268	4,726	277	674	989	657	248
10-14 YEARS............	12,311	4,678	3,129	1,495	54	2,242	1,163	804	275	3,497	247	477	524	399	247
15-19 YEARS............	9,068	3,109	1,944	1,084	81	2,141	1,176	712	253	2,599	80	336	404	252	147
20-24 YEARS............	8,307	2,565	1,544	960	61	2,281	1,279	679	323	2,317	77	182	452	232	201
25-29 YEARS............	7,031	1,918	1,037	806	75	1,974	1,041	680	253	1,822	139	248	269	508	153
30-34 YEARS............	3,639	863	455	398	10	843	351	318	174	825	52	126	167	647	116
35-39 YEARS............	2,846	477	279	150	48	541	293	140	108	596	98	108	102	854	70
40 OR MORE YEARS.......	1,995	228	111	117	*	212	90	84	38	238	71	63	97	1,015	71
NO REPORT..............	1,686	310	279	26	5	123	64	55	4	167	13	107	91	713	162

* NO CASES REPORTED

TABLE B-11. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, YEARS OF PROFESSIONAL EXPERIENCE, AND PRIMARY WORK ACTIVITY: 1977 CONTINUED

FIELD AND YEARS OF PROFESSIONAL EXPERIENCE	TOTAL	RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....				TEACHING	CONSULTING	SALES/ PROF. SERVICES	OTHER	NOT EMPLOYED	NO REPORT
		TOTAL	BASIC RESEARCH	APPL'D RESEARCH	DEVELOPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH						
BIOLOGICAL SCIENTISTS															
TOTAL	46,788	19,187	15,678	3,117	392	6,009	3,129	2,017	863	13,498	425	462	1,688	4,627	892
1 OR LESS YEARS	1,429	817	745	46	26	83	40	28	15	224	*	15	51	229	10
2-4 YEARS	7,075	4,307	3,744	475	88	379	225	111	43	1,368	56	72	276	537	80
5-9 YEARS	11,491	5,524	4,479	901	144	1,089	676	288	125	3,538	104	122	415	553	146
10-14 YEARS	7,129	2,854	2,338	485	31	925	500	322	103	2,502	101	95	195	281	176
15-19 YEARS	5,125	1,939	1,557	366	16	864	433	333	98	1,829	28	55	166	154	90
20-24 YEARS	4,740	1,517	1,134	367	16	1,051	508	377	166	1,583	32	26	263	170	98
25-29 YEARS	3,758	1,062	761	271	30	813	415	291	107	1,256	45	33	112	352	85
30-34 YEARS	2,019	477	353	114	10	379	128	133	118	530	15	10	84	455	69
35-39 YEARS	1,771	338	255	52	31	268	133	75	60	394	33	8	39	639	52
40 OR MORE YEARS	1,179	112	84	28	*	106	38	42	26	156	11	*	37	730	27
NO REPORT	1,072	240	228	12	*	52	33	17	2	118	*	26	50	527	59
AGRICULTURAL SCIENTISTS															
TOTAL	15,062	5,542	1,296	3,972	274	3,341	2,120	861	360	2,822	463	510	1,300	769	315
1 OR LESS YEARS	217	133	47	83	3	41	38	3	*	21	*	14	*	2	6
2-4 YEARS	1,490	586	93	457	36	305	241	26	38	272	18	27	226	35	21
5-9 YEARS	2,956	1,216	319	781	116	430	269	115	46	629	138	158	334	19	32
10-14 YEARS	2,656	1,099	305	784	10	538	276	222	40	473	106	136	217	55	32
15-19 YEARS	2,091	803	158	591	54	532	356	132	44	418	24	59	183	26	46
20-24 YEARS	1,824	680	194	457	29	557	384	100	73	302	17	43	143	23	59
25-29 YEARS	1,734	545	114	411	20	568	366	119	83	323	61	31	81	90	35
30-34 YEARS	959	275	41	234	*	239	123	94	22	189	29	18	45	136	28
35-39 YEARS	500	88	6	76	6	82	43	27	12	102	32	12	32	146	6
40 OR MORE YEARS	439	96	7	89	*	24	18	6	*	53	28	12	26	182	18
NO REPORT	196	21	12	9	*	25	6	17	2	40	10	*	13	55	32
MEDICAL SCIENTISTS															
TOTAL	16,485	4,849	3,024	1,571	254	4,324	2,240	1,490	594	2,671	297	2,067	827	1,015	435
1 OR LESS YEARS	681	215	138	60	17	5	4	*	1	48	*	175	63	161	14
2-4 YEARS	2,471	1,144	794	279	71	214	127	63	24	271	57	415	104	170	96
5-9 YEARS	3,642	1,488	861	542	85	771	412	262	97	559	35	394	240	85	70
10-14 YEARS	2,526	725	486	226	13	779	387	260	132	522	40	246	112	63	39
15-19 YEARS	1,852	367	229	127	11	745	387	247	111	352	28	222	55	72	11
20-24 YEARS	1,743	368	216	136	16	673	387	202	84	432	28	113	46	39	44
25-29 YEARS	1,539	311	162	124	25	593	260	270	63	243	33	184	76	66	33
30-34 YEARS	661	111	61	50	*	225	100	91	34	106	8	98	38	56	19
35-39 YEARS	575	51	18	22	11	191	117	38	36	100	33	88	31	69	12
40 OR MORE YEARS	377	20	20	*	*	82	34	36	12	29	32	51	34	103	26
NO REPORT	418	49	39	5	5	46	25	21	*	9	3	81	28	131	71
PSYCHOLOGISTS															
TOTAL	35,718	4,026	1,948	1,765	313	5,920	1,625	3,467	828	10,836	1,481	9,585	1,175	1,994	701
1 OR LESS YEARS	605	77	45	32	*	33	12	21	*	166	7	214	23	60	25
2-4 YEARS	5,088	773	413	313	47	374	58	285	31	1,529	173	1,805	95	244	95
5-9 YEARS	8,886	1,259	642	513	104	1,196	353	677	166	2,859	352	2,519	274	286	141
10-14 YEARS	6,078	677	314	316	47	962	285	559	118	2,105	210	1,588	257	169	110
15-19 YEARS	4,104	359	166	166	27	1,045	297	605	143	1,185	136	1,016	160	165	38
20-24 YEARS	4,049	372	200	123	49	1,023	223	631	169	1,223	209	877	174	97	74
25-29 YEARS	3,378	268	81	156	31	710	263	344	103	914	191	915	89	200	91
30-34 YEARS	1,432	103	35	68	*	289	65	160	64	417	96	295	37	141	54
35-39 YEARS	708	31	9	22	*	123	37	80	6	189	52	120	15	167	11
40 OR MORE YEARS	665	46	16	22	8	70	20	39	11	149	31	87	31	242	9
NO REPORT	725	61	27	34	*	95	12	66	17	100	24	149	20	223	53
SOCIAL SCIENTISTS															
TOTAL	45,849	7,080	3,166	3,480	434	7,299	1,850	4,270	1,179	23,273	788	536	2,411	3,122	1,340
1 OR LESS YEARS	559	126	64	62	*	17	*	17	*	228	*	18	58	90	22
2-4 YEARS	4,702	1,145	534	502	109	368	121	206	41	2,461	52	85	289	208	94
5-9 YEARS	11,349	2,274	909	1,276	89	1,332	457	659	216	6,198	185	98	660	354	248
10-14 YEARS	8,584	1,310	543	702	65	1,562	416	899	247	4,470	179	98	486	252	227
15-19 YEARS	5,511	731	418	257	56	934	249	558	127	3,152	56	93	218	153	174
20-24 YEARS	4,490	425	194	188	43	1,009	216	652	141	2,374	66	51	240	169	156
25-29 YEARS	4,238	471	186	233	52	959	175	605	179	2,121	71	25	134	254	203
30-34 YEARS	2,623	226	111	115	*	599	148	358	93	1,122	61	27	130	405	53
35-39 YEARS	1,523	153	97	49	7	203	20	113	70	696	47	23	98	272	31
40 OR MORE YEARS	1,442	110	55	55	*	207	31	136	40	304	56	18	43	648	56
NO REPORT	828	109	55	41	13	109	17	67	25	147	15	*	55	317	76
ECONOMISTS															
TOTAL	11,689	2,517	678	1,705	134	1,940	524	1,160	256	5,115	277	146	562	899	233
1 OR LESS YEARS	107	47	30	17	*	14	*	14	*	41	*	*	*	5	*
2-4 YEARS	1,096	519	162	339	18	70	70	*	*	415	12	13	44	4	19
5-9 YEARS	2,740	777	149	599	29	249	58	167	24	1,322	63	40	222	65	2
10-14 YEARS	2,256	488	121	355	12	505	181	307	17	1,007	28	24	80	75	49
15-19 YEARS	1,305	237	106	104	27	178	49	102	27	708	41	16	60	37	28
20-24 YEARS	996	123	44	69	10	238	63	136	39	478	25	12	73	22	25
25-29 YEARS	1,078	161	30	106	25	261	32	174	55	444	45	*	22	102	43
30-34 YEARS	790	45	*	45	*	217	48	141	28	366	25	6	9	117	5
35-39 YEARS	572	50	18	32	*	87	5	56	26	246	12	23	21	122	11
40 OR MORE YEARS	517	15	2	13	*	76	3	58	15	80	26	12	16	270	22
NO REPORT	232	55	16	26	13	45	15	5	25	8	*	*	15	80	29
SOCIOLOGISTS/ANTHRO.															
TOTAL	10,352	1,641	978	590	73	1,088	349	569	170	5,945	29	71	414	859	305
1 OR LESS YEARS	107	30	4	26	*	*	*	*	*	61	*	*	*	16	*
2-4 YEARS	1,109	245	193	40	12	50	2	39	9	609	*	10	65	118	12
5-9 YEARS	2,801	561	325	218	18	184	109	44	31	1,750	*	4	123	121	58
10-14 YEARS	1,918	295	140	143	12	211	45	147	19	1,219	*	24	45	89	35
15-19 YEARS	1,144	176	124	42	10	164	67	80	17	688	*	17	31	42	26
20-24 YEARS	1,105	115	67	32	16	147	40	92	15	687	7	13	19	79	38
25-29 YEARS	899	83	25	53	5	163	71	59	33	453	10	*	55	39	96
30-34 YEARS	531	69	49	20	*	86	2	56	28	256	*	*	37	65	18
35-39 YEARS	277	31	25	6	*	37	*	19	18	116	*	*	23	65	5
40 OR MORE YEARS	295	21	11	10	*	33	13	20	*	71	10	3	*	155	2
NO REPORT	166	15	15	*	*	13	*	13	*	35	2	*	16	70	15

* NO CASES REPORTED

TABLE B-11. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, YEARS OF PROFESSIONAL EXPERIENCE, AND PRIMARY WORK ACTIVITY: 1977 CONTINUED

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
FIELD AND YEARS OF PROFESSIONAL EXPERIENCE	TOTAL	TOTAL	BASIC RE-SEARCH	APPL'D RE-SEARCH	DEVEL-OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH-ING	CON-SULT-ING	SALES/ PROF. SER-VICES	OTHER	NOT EM-PLOYED	NO REPORT
OTHER SOCIAL SCIENTISTS															
TOTAL......................	23,808	2,922	1,510	1,185	227	4,271	977	2,541	753	12,213	482	319	1,435	1,364	802
1 OR LESS YEARS.........	345	49	30	19	*	3	*	3	*	126	*	18	58	69	22
2-4 YEARS...............	2,497	381	179	123	79	248	49	167	32	1,437	40	62	180	86	63
5-9 YEARS...............	5,808	936	435	459	42	899	290	448	161	3,126	122	54	315	168	188
10-14 YEARS.............	4,410	527	282	204	41	846	190	445	211	2,244	151	50	361	88	143
15-19 YEARS.............	3,062	318	188	111	19	592	133	376	83	1,756	15	60	127	74	120
20-24 YEARS.............	2,389	187	83	87	17	624	113	424	87	1,209	34	26	148	68	93
25-29 YEARS.............	2,261	227	131	74	22	535	72	372	91	1,224	16	25	57	113	64
30-34 YEARS.............	1,302	112	62	50	*	296	98	161	37	500	36	21	84	223	30
35-39 YEARS.............	674	72	54	11	7	79	15	38	26	334	35	*	54	85	15
40 OR MORE YEARS.......	630	74	42	32	*	98	15	58	25	153	20	3	27	223	32
NO REPORT...............	430	39	24	15	*	51	2	49	*	104	13	*	24	167	32

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-12. MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX, AND RACE: 1977

		.......SEX.......		....................RACE....................				
FIELD	TOTAL	MEN	WOMEN	WHITE	BLACK	AMERICAN INDIAN	ASIAN	NO REPORT
TOTAL....................	25,600	26,000	20,700	25,700	23,800	23,900	23,800	25,700
PHYSICAL SCIENTISTS........	26,600	26,800	21,200	26,800	23,900	**	23,300	26,500
CHEMISTS..................	26,600	27,000	20,900	26,900	24,200	**	23,200	26,000
PHYSICISTS/ASTRONOMERS...	26,500	26,600	23,100	26,700	**	**	23,300	27,300
MATHEMATICAL SCIENTISTS...	23,300	23,600	19,900	23,400	23,200	**	22,100	23,100
MATHEMATICIANS............	23,100	23,400	19,900	23,200	22,800	**	22,500	23,100
STATISTICIANS.............	25,100	25,400	19,800	25,500	**	**	**	**
COMPUTER SPECIALISTS......	25,800	26,100	20,800	26,500	**	**	21,200	**
ENVIRONMENTAL SCIENTISTS..	25,800	26,000	19,700	25,900	**	**	23,500	30,800
EARTH SCIENTISTS..........	25,900	26,000	20,000	25,900	**	**	23,500	29,100
OCEANOGRAPHERS............	24,100	24,400	19,200	24,100	**	**	**	**
ATMOSPHERIC SCIENTISTS...	28,300	28,900	19,200	27,800	**	**	22,700	**
ENGINEERS.................	28,600	28,700	22,900	29,300	28,600	**	25,000	27,800
LIFE SCIENTISTS...........	24,700	25,100	21,000	24,800	24,800	22,500	22,600	24,600
BIOLOGICAL SCIENTISTS....	23,800	24,300	20,500	23,900	24,700	**	22,100	23,600
AGRICULTURAL SCIENTISTS..	24,800	24,900	20,200	25,000	**	**	20,600	25,300
MEDICAL SCIENTISTS.......	28,000	28,900	22,800	28,300	26,900	**	25,400	26,500
PSYCHOLOGISTS.............	24,100	24,900	20,600	24,100	21,500	22,300	24,400	25,700
SOCIAL SCIENTISTS.........	24,100	24,700	20,200	24,100	22,900	**	22,900	24,900
ECONOMISTS................	27,000	27,500	23,600	27,000	**	**	25,900	28,300
SOCIOLOGISTS/ANTHRO......	22,200	22,900	19,700	22,200	23,200	**	22,200	22,600
OTHER SOCIAL SCIENTISTS..	23,200	23,900	19,800	23,300	22,700	**	21,100	24,500

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NOTE: MEDIAN SALARIES COMPUTED ONLY FOR FULL-TIME EMPLOYED CIVILIANS

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-13. MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND AGE: 1977

		AGE											
FIELD	TOTAL	24 OR UNDER	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 OR OVER	NO REPORT
TOTAL....................	25,600	**	18,500	20,400	23,600	26,500	29,200	30,900	31,600	31,400	31,400	29,500	26,600
PHYSICAL SCIENTISTS.......	26,600	**	20,100	21,100	24,200	28,100	30,500	32,600	33,300	34,000	31,400	**	**
CHEMISTS..................	26,600	**	19,900	21,200	24,400	28,200	30,400	32,300	32,600	34,600	30,600	**	**
PHYSICISTS/ASTRONOMERS...	26,500	**	21,400	20,900	23,700	27,800	30,700	33,200	34,200	33,000	36,100	**	**
MATHEMATICAL SCIENTISTS...	23,300	**	16,600	18,900	22,400	24,900	28,100	30,900	30,700	30,900	36,000	**	**
MATHEMATICIANS............	23,100	**	16,300	18,800	22,100	24,800	28,000	30,800	30,400	30,400	36,200	**	**
STATISTICIANS.............	25,100	**	**	19,900	23,700	28,000	30,100	**	**	**	**	**	**
COMPUTER SPECIALISTS......	25,800	**	19,600	21,600	25,600	28,800	32,800	33,200	35,200	**	**	**	**
ENVIRONMENTAL SCIENTISTS..	25,800	**	20,100	20,400	23,800	25,800	29,300	32,400	33,000	34,500	33,800	**	**
EARTH SCIENTISTS.........	25,900	**	**	20,800	23,600	25,400	28,700	31,400	31,900	34,500	33,700	**	**
OCEANOGRAPHERS............	24,100	**	**	19,200	23,400	25,600	29,400	**	**	**	**	**	**
ATMOSPHERIC SCIENTISTS...	28,300	**	**	20,000	26,300	29,300	33,500	37,200	**	**	**	**	**
ENGINEERS.................	28,600	**	21,300	24,100	27,200	29,500	31,300	34,000	34,800	34,400	33,500	**	**
LIFE SCIENTISTS...........	24,700	**	18,000	19,500	22,300	25,300	27,700	30,100	30,400	30,500	30,300	30,800	**
BIOLOGICAL SCIENTISTS....	23,800	**	17,500	19,100	21,800	24,400	26,800	29,700	29,800	30,200	30,000	**	**
AGRICULTURAL SCIENTISTS..	24,800	**	**	20,000	22,100	24,700	26,400	28,500	30,000	28,500	27,600	**	**
MEDICAL SCIENTISTS.......	28,000	**	18,400	20,500	25,100	30,500	30,700	32,800	33,700	35,800	32,900	**	**
PSYCHOLOGISTS.............	24,100	**	17,400	19,300	22,200	25,100	27,000	29,200	30,300	30,400	30,000	**	**
SOCIAL SCIENTISTS.........	24,100	**	18,400	19,100	22,000	24,200	26,200	29,000	30,300	30,500	34,500	**	**
ECONOMISTS................	27,000	**	20,100	22,500	25,700	26,800	30,500	30,400	33,300	31,500	39,500	**	**
SOCIOLOGISTS/ANTHRO......	22,200	**	**	17,800	20,000	23,100	24,900	26,500	29,100	30,100	35,000	**	**
OTHER SOCIAL SCIENTISTS..	23,200	**	18,000	18,400	21,200	23,700	25,800	29,300	30,200	30,100	33,200	**	**

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-14. MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND PRIMARY WORK ACTIVITY: 1977

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....								
FIELD	TOTAL	TOTAL	BASIC RE-SEARCH	APPL'D RE-SEARCH	DEVEL-OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH-ING	CON-SULT-ING	SALES/ PROF. SER-VICES	OTHER	NOT EM-PLOYED	NO REPORT
TOTAL....................	25,600	25,600	24,600	26,300	26,100	31,900	33,100	30,200	32,200	22,600	28,200	24,700	24,700	**	25,400
PHYSICAL SCIENTISTS.......	26,600	26,300	25,300	27,000	26,700	33,400	34,300	31,000	32,700	22,600	30,500	27,500	25,300	**	29,400
CHEMISTS..................	26,600	26,100	25,200	26,400	26,800	33,300	33,800	33,000	32,100	22,200	30,400	26,800	25,700	**	26,300
PHYSICISTS/ASTRONOMERS...	26,500	26,800	25,500	28,300	26,300	33,500	35,000	29,800	33,900	23,100	**	29,400	22,900	**	**
MATHEMATICAL SCIENTISTS...	23,300	25,800	24,800	27,700	25,500	29,900	33,000	29,200	28,400	21,700	**	**	22,800	**	**
MATHEMATICIANS............	23,100	25,700	24,800	28,200	25,300	29,100	33,900	28,200	27,000	21,600	**	**	22,700	**	**
STATISTICIANS.............	25,100	26,400	**	27,000	**	31,700	**	**	**	22,200	**	**	**	**	**
COMPUTER SPECIALISTS......	25,800	24,900	26,900	28,100	24,200	31,400	33,100	30,200	32,100	22,900	**	**	17,800	**	**
ENVIRONMENTAL SCIENTISTS..	25,800	25,800	25,900	25,700	25,700	31,400	32,500	30,400	32,100	22,400	28,500	**	25,300	**	22,700
EARTH SCIENTISTS..........	25,900	26,600	27,500	26,100	**	31,400	32,500	30,500	33,100	22,000	28,000	**	25,500	**	23,000
OCEANOGRAPHERS............	24,100	22,600	21,900	24,500	**	29,400	29,500	**	**	23,900	**	**	**	**	**
ATMOSPHERIC SCIENTISTS...	28,300	26,800	27,900	24,300	**	32,100	33,700	**	**	25,800	**	**	**	**	**
ENGINEERS.................	28,600	27,000	27,700	27,000	27,000	34,200	34,500	33,300	34,800	25,200	30,300	28,700	26,300	**	29,700
LIFE SCIENTISTS...........	24,700	24,100	23,800	24,600	23,500	31,300	31,900	30,200	32,300	22,500	25,500	25,700	23,300	**	24,500
BIOLOGICAL SCIENTISTS....	23,800	23,800	23,600	25,000	22,500	30,400	30,800	29,200	31,400	21,900	25,300	23,500	23,600	**	24,400
AGRICULTURAL SCIENTISTS..	24,800	24,300	25,200	24,100	25,000	30,900	31,400	30,400	30,200	23,100	25,500	22,500	22,600	**	26,200
MEDICAL SCIENTISTS.......	28,000	24,900	24,300	26,300	24,600	33,300	34,200	31,000	34,000	25,400	28,000	34,600	24,300	**	23,900
PSYCHOLOGISTS.............	24,100	24,300	23,000	25,200	23,600	28,100	30,800	26,800	29,400	21,900	25,500	23,800	25,400	**	22,800
SOCIAL SCIENTISTS.........	24,100	24,800	24,200	26,000	20,600	29,900	30,200	29,500	29,800	22,300	28,900	26,000	25,100	**	25,500
ECONOMISTS................	27,000	27,800	25,800	29,200	**	35,300	35,400	32,200	43,100	24,500	35,300	**	29,800	**	**
SOCIOLOGISTS/ANTHRO......	22,200	22,500	22,300	23,700	**	27,300	26,700	28,100	28,600	21,300	**	**	22,400	**	26,100
OTHER SOCIAL SCIENTISTS..	23,200	24,000	24,200	24,300	20,200	28,700	29,500	28,500	28,000	21,700	25,600	25,200	24,000	**	24,100

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-15. MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND TYPE OF EMPLOYER: 1977

FIELD	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL	HOSPITAL/ CLINIC	NON-PROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
TOTAL....................	25,600	29,900	23,700	23,800	20,900	22,400	23,600	26,800	29,700	**	21,600	22,100	37,500	**	**
PHYSICAL SCIENTISTS........	26,600	29,900	23,600	23,900	20,800	18,100	26,500	25,900	29,700	**	20,200	**	**	**	**
CHEMISTS....................	26,600	30,000	22,800	23,000	21,400	15,800	26,500	25,500	29,100	**	19,900	**	**	**	**
PHYSICISTS/ASTRONOMERS...	26,500	29,700	24,400	24,600	20,100	**	**	26,800	30,100	**	**	**	**	**	**
MATHEMATICAL SCIENTISTS...	23,300	27,400	22,700	22,800	17,800	**	**	28,600	29,300	**	**	**	**	**	**
MATHEMATICIANS............	23,100	27,300	22,600	22,700	17,800	**	**	30,300	29,400	**	**	**	**	**	**
STATISTICIANS.............	25,100	27,600	23,200	23,200	**	**	**	**	**	**	**	**	**	**	**
COMPUTER SPECIALISTS.......	25,800	26,700	24,400	24,400	**	**	**	**	30,500	**	**	**	**	**	**
ENVIRONMENTAL SCIENTISTS..	25,800	28,600	23,600	23,700	**	**	**	27,600	30,700	**	21,000	**	**	**	**
EARTH SCIENTISTS..........	25,900	28,600	23,400	23,600	**	**	**	28,600	30,600	**	22,200	**	**	**	**
OCEANOGRAPHERS............	24,100	**	23,600	23,600	**	**	**	**	28,300	**	**	**	**	**	**
ATMOSPHERIC SCIENTISTS...	28,300	29,200	25,200	25,200	**	**	**	**	31,400	**	**	**	**	**	**
ENGINEERS..................	28,600	30,000	26,500	26,500	23,800	**	**	30,100	30,000	**	21,700	**	**	**	**
LIFE SCIENTISTS............	24,700	28,700	23,500	23,600	20,600	19,300	25,300	24,500	28,400	**	21,100	22,700	**	**	**
BIOLOGICAL SCIENTISTS....	23,800	27,400	22,800	22,900	20,500	19,300	23,700	23,200	27,900	**	20,100	**	**	**	**
AGRICULTURAL SCIENTISTS..	24,800	26,800	23,700	23,800	**	**	**	**	27,700	**	20,600	**	**	**	**
MEDICAL SCIENTISTS.......	28,000	33,200	25,800	25,800	**	**	26,300	26,100	32,400	**	23,300	25,600	**	**	**
PSYCHOLOGISTS..............	24,100	33,300	22,700	22,700	20,300	23,900	23,200	24,400	30,600	**	22,900	23,600	**	**	**
SOCIAL SCIENTISTS..........	24,100	30,200	23,100	23,200	22,400	20,700	**	26,800	31,400	**	22,100	19,800	37,400	**	**
ECONOMISTS................	27,000	34,100	25,100	25,100	**	**	**	34,200	32,900	**	**	**	43,300	**	**
SOCIOLOGISTS/ANTHRO......	22,200	**	22,100	22,100	21,600	**	**	22,400	**	**	**	**	**	**	**
OTHER SOCIAL SCIENTISTS..	23,200	26,800	22,700	22,700	23,100	20,600	**	25,300	31,300	**	21,800	19,300	**	**	**

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-16. MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND YEARS OF PROFESSIONAL EXPERIENCE: 1977

		YEARS OF PROFESSIONAL EXPERIENCE										
FIELD	TOTAL	1 OR LESS YEARS	2-4 YEARS	5-9 YEARS	10-14 YEARS	15-19 YEARS	20-24 YEARS	25-29 YEARS	30-34 YEARS	35-39 YEARS	40 OR MORE YEARS	NO REPORT
TOTAL....................	25,600	17,800	19,000	22,000	25,500	28,200	30,700	32,200	32,500	33,900	33,600	26,100
PHYSICAL SCIENTISTS........	26,600	20,000	20,200	22,600	26,400	29,300	32,000	33,800	32,700	35,600	35,100	27,100
CHEMISTS....................	26,600	20,200	20,200	23,100	26,400	28,800	31,700	33,100	32,800	35,600	34,200	27,500
PHYSICISTS/ASTRONOMERS...	26,500	18,400	20,300	21,800	26,400	29,900	32,500	34,600	32,300	35,600	36,400	**
MATHEMATICAL SCIENTISTS...	23,300	15,600	17,400	20,000	23,500	25,800	28,900	31,000	31,000	33,200	33,500	**
MATHEMATICIANS............	23,100	15,500	17,300	19,700	23,400	25,500	28,900	30,800	30,600	32,800	33,800	**
STATISTICIANS.............	25,100	**	17,900	23,500	24,300	28,800	30,100	**	**	**	**	**
COMPUTER SPECIALISTS.......	25,800	**	19,000	23,900	28,000	28,600	33,700	35,100	**	**	**	**
ENVIRONMENTAL SCIENTISTS..	25,800	**	20,600	21,400	25,600	28,400	32,500	32,600	34,900	34,500	36,300	**
EARTH SCIENTISTS..........	25,900	**	20,700	21,500	25,400	28,400	31,900	31,200	34,800	34,800	34,900	**
OCEANOGRAPHERS............	24,100	**	19,800	20,100	25,400	**	**	**	**	**	**	**
ATMOSPHERIC SCIENTISTS...	28,300	**	20,000	22,400	28,500	29,600	33,300	37,200	**	**	**	**
ENGINEERS..................	28,600	20,200	21,900	25,800	28,200	30,600	32,600	34,500	35,400	34,200	36,700	27,400
LIFE SCIENTISTS............	24,700	17,700	18,800	21,400	24,700	27,100	29,600	31,300	31,200	32,400	31,500	23,100
BIOLOGICAL SCIENTISTS....	23,800	17,700	18,400	20,800	24,100	26,500	29,100	30,900	30,500	32,400	30,800	20,400
AGRICULTURAL SCIENTISTS..	24,800	**	19,300	21,300	24,200	26,100	28,700	30,000	30,800	29,100	30,300	**
MEDICAL SCIENTISTS.......	28,000	17,400	20,200	24,100	28,500	31,200	33,200	35,500	34,700	35,600	39,600	27,100
PSYCHOLOGISTS..............	24,100	15,900	18,000	21,100	24,400	26,300	29,900	30,800	30,800	31,000	31,900	24,500
SOCIAL SCIENTISTS..........	24,100	16,300	17,700	20,600	24,200	26,400	28,900	30,800	31,800	33,600	34,300	25,400
ECONOMISTS................	27,000	**	20,300	23,600	27,700	28,800	32,000	32,700	31,900	36,100	36,600	**
SOCIOLOGISTS/ANTHRO......	22,200	**	17,200	19,300	22,800	25,900	26,700	30,500	30,500	34,000	**	**
OTHER SOCIAL SCIENTISTS..	23,200	**	17,200	19,900	22,900	25,800	28,700	30,300	32,100	32,000	31,900	25,200

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-17. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY GEOGRAPHIC DIVISION, STATE, AND FIELD: 1977

GEOGRAPHIC DIVISION AND STATE	TOTAL	PHYSICAL SCIENTISTS			...MATH. SCIENTISTS....			COMPUTER SPECIALISTS	ENVIRONMENTAL SCIENTISTS			
		TOTAL	CHEMISTS	PHYSICISTS/ ASTRON.	TOTAL	MATH.	STAT.		TOTAL	EARTH SCI.	OCEAN.	ATMOS. SCI.
TOTAL....................	303,267	62,055	40,650	21,405	15,406	13,665	1,741	5,822	13,543	10,235	1,592	1,716
NEW ENGLAND..............	22,923	4,945	2,844	2,101	1,216	1,142	74	540	1,066	612	284	170
CONNECTICUT............	5,260	1,278	873	405	226	218	8	55	156	109	18	29
MAINE..................	1,252	189	118	71	96	96	*	3	61	41	20	*
MASSACHUSETTS..........	13,062	2,895	1,508	1,387	726	673	53	381	638	339	160	139
NEW HAMPSHIRE..........	1,149	180	76	104	67	58	9	25	44	34	10	*
RHODE ISLAND...........	1,370	246	172	74	75	71	4	47	123	45	76	2
VERMONT................	830	157	97	60	26	26	*	29	44	44	*	*
MIDDLE ATLANTIC..........	57,366	14,092	10,024	4,068	2,854	2,566	288	1,344	1,413	1,124	169	120
NEW JERSEY.............	12,016	3,866	3,010	856	525	440	85	445	187	161	6	20
NEW YORK...............	29,563	6,777	4,571	2,206	1,709	1,631	78	683	842	628	157	57
PENNSYLVANIA...........	15,787	3,449	2,443	1,006	620	495	125	216	384	335	6	43
EAST NORTH CENTRAL.......	48,915	10,213	7,334	2,879	2,669	2,399	270	902	1,370	1,197	61	112
ILLINOIS...............	14,264	2,774	1,858	916	784	716	68	345	390	347	4	39
INDIANA................	5,969	1,174	832	342	400	363	37	74	125	114	10	1
MICHIGAN...............	10,521	2,247	1,641	606	534	462	72	184	267	173	43	51
OHIO...................	12,608	3,112	2,449	663	640	570	70	241	345	341	4	*
WISCONSIN..............	5,553	906	554	352	311	288	23	58	243	222	*	21
WEST NORTH CENTRAL.......	19,020	3,188	2,433	755	1,102	963	139	330	544	437	*	107
IOWA...................	2,932	368	238	130	202	148	54	44	44	44	*	*
KANSAS.................	2,705	408	296	112	153	133	20	60	67	61	*	6
MINNESOTA..............	5,119	1,068	809	259	297	278	19	141	94	94	*	*
MISSOURI...............	5,136	960	790	170	277	247	30	55	206	141	*	65
NORTH DAKOTA...........	779	115	105	10	43	29	14	*	30	30	*	*
NEBRASKA...............	1,670	180	161	19	81	79	2	30	58	44	*	14
SOUTH DAKOTA...........	679	89	34	55	49	49	*	*	45	23	*	22
SOUTH ATLANTIC...........	53,813	11,402	7,436	3,966	2,595	2,125	470	780	2,563	1,824	378	361
DELAWARE...............	3,288	1,948	1,794	154	22	22	*	31	47	25	22	*
DISTRICT OF COLUMBIA..	10,353	1,859	776	1,083	438	293	145	163	538	399	55	84
FLORIDA................	6,812	965	620	345	252	216	36	97	320	233	54	33
GEORGIA................	4,351	645	435	210	246	199	47	50	149	129	6	14
MARYLAND...............	10,696	2,069	1,006	1,063	569	479	90	243	510	248	82	180
NORTH CAROLINA.........	6,003	1,207	948	259	306	271	35	51	265	156	71	38
SOUTH CAROLINA.........	2,489	618	480	138	193	134	59	24	69	57	12	*
VIRGINIA...............	8,208	1,618	969	649	523	494	29	103	617	529	76	12
WEST VIRGINIA..........	1,613	473	408	65	46	17	29	18	48	48	*	*
EAST SOUTH CENTRAL.......	12,260	2,123	1,489	634	800	692	108	101	343	272	24	47
ALABAMA................	3,013	483	245	238	176	166	10	15	69	27	24	18
KENTUCKY...............	2,695	368	274	94	176	169	7	7	62	62	*	*
MISSISSIPPI............	1,777	223	190	33	87	74	13	9	79	69	*	10
TENNESSEE..............	4,775	1,049	780	269	361	283	78	70	133	114	*	19
WEST SOUTH CENTRAL.......	21,955	3,987	2,865	1,122	1,263	1,103	160	458	1,653	1,462	117	74
ARKANSAS...............	1,305	184	138	46	69	51	18	5	41	41	*	*
LOUISIANA..............	3,368	641	470	171	243	233	10	48	208	162	46	*
OKLAHOMA...............	2,690	380	333	47	164	142	22	46	242	240	*	2
TEXAS..................	14,592	2,782	1,924	858	787	677	110	359	1,162	1,019	71	72
MOUNTAIN.................	19,286	3,454	1,681	1,773	991	877	114	304	1,896	1,576	18	302
ARIZONA................	3,261	520	248	272	120	119	1	1	243	217	8	18
COLORADO...............	6,201	716	349	367	322	310	12	133	932	727	10	195
IDAHO..................	1,199	191	133	58	85	54	31	*	83	73	*	10
MONTANA................	981	80	53	27	59	38	21	8	98	87	*	11
NEW MEXICO.............	3,813	1,443	501	942	240	196	44	106	247	199	*	48
NEVADA.................	556	54	39	15	24	24	*	*	65	65	*	*
UTAH...................	2,381	395	309	86	119	119	*	45	122	107	*	15
WYOMING................	694	55	49	6	22	17	5	11	106	101	*	5
PACIFIC..................	47,729	8,651	4,544	4,107	1,916	1,798	118	1,063	2,695	1,731	541	423
ALASKA.................	510	43	37	6	19	19	*	*	181	119	35	27
CALIFORNIA.............	36,075	7,133	3,644	3,489	1,439	1,356	83	929	1,954	1,326	319	309
HAWAII.................	1,350	197	122	75	28	27	1	21	113	44	67	2
OREGON.................	3,314	425	283	142	175	162	13	46	158	84	58	16
WASHINGTON.............	5,792	[illegible]	405	345	240	219	21	65	271	151	53	67
U.S. POSSESSIONS.......	688	103	53	50	15	15	*	2	18	7	9	2

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-17. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY GEOGRAPHIC DIVISION, STATE, AND FIELD: 1977

GEOGRAPHIC DIVISION AND STATE	ENGI-NEERS	.......LIFE SCIENTISTS........				PSY-CHOL-OGISTS	......SOCIAL SCIENTISTS.......			
		TOTAL	BIOL. SCI.	AGRIC. SCI.	MEDICAL SCI.		TOTAL	ECON-OMISTS	SOCIO/ ANTHRO.	OTHER
TOTAL..................	46,539	78,335	46,788	15,062	16,485	35,718	45,849	11,689	10,352	23,808
NEW ENGLAND............	3,334	5,068	3,524	511	1,033	2,891	3,863	1,034	954	1,875
CONNECTICUT............	787	1,183	750	153	280	674	901	254	200	447
MAINE..................	162	302	189	91	22	220	219	84	85	50
MASSACHUSETTS..........	2,060	2,729	1,968	161	600	1,612	2,021	557	513	951
NEW HAMPSHIRE..........	105	322	234	46	42	133	273	76	46	151
RHODE ISLAND...........	129	306	229	10	67	154	290	25	69	196
VERMONT................	91	226	154	50	22	98	159	38	41	80
MIDDLE ATLANTIC........	9,293	12,543	8,098	1,236	3,209	7,799	8,028	2,004	2,018	4,006
NEW JERSEY.............	2,621	2,224	1,355	297	572	1,021	1,127	365	279	483
NEW YORK...............	3,593	6,446	4,302	456	1,688	4,771	4,742	1,123	1,222	2,397
PENNSYLVANIA...........	3,079	3,873	2,441	483	949	2,007	2,159	516	517	1,126
EAST NORTH CENTRAL.....	7,791	12,571	7,368	2,203	3,000	5,556	7,843	1,770	1,854	4,219
ILLINOIS...............	2,132	3,673	2,064	619	990	1,719	2,447	612	593	1,242
INDIANA................	849	1,756	1,035	339	382	722	869	160	227	482
MICHIGAN...............	1,589	2,742	1,611	453	678	1,499	1,459	276	372	811
OHIO...................	2,432	2,773	1,625	448	700	1,108	1,957	550	439	968
WISCONSIN..............	789	1,627	1,033	344	250	508	1,111	172	223	716
WEST NORTH CENTRAL.....	2,068	6,592	3,531	1,811	1,250	2,452	2,744	655	766	1,323
IOWA...................	324	1,170	577	397	196	360	420	81	133	206
KANSAS.................	254	726	458	172	96	597	440	76	145	219
MINNESOTA..............	394	1,711	858	429	424	771	643	196	128	319
MISSOURI...............	782	1,626	947	337	342	413	817	217	222	378
NORTH DAKOTA...........	104	297	124	151	22	69	121	28	29	64
NEBRASKA...............	160	797	381	256	160	173	191	43	58	90
SOUTH DAKOTA...........	50	265	186	69	10	69	112	14	51	47
SOUTH ATLANTIC.........	7,303	14,690	8,270	3,202	3,218	5,281	9,199	2,897	1,551	4,751
DELAWARE...............	574	413	206	101	106	66	187	85	39	63
DISTRICT OF COLUMBIA..	1,334	1,907	797	702	408	666	3,448	1,434	207	1,807
FLORIDA................	999	2,089	1,122	535	432	1,020	1,070	262	253	555
GEORGIA................	424	1,613	992	340	281	599	625	186	153	286
MARYLAND...............	1,298	3,919	2,358	544	1,017	1,011	1,077	274	269	534
NORTH CAROLINA.........	585	1,966	1,200	305	461	659	964	97	311	556
SOUTH CAROLINA.........	333	608	317	162	129	255	389	138	102	149
VIRGINIA...............	1,558	1,662	989	360	313	865	1,262	371	172	719
WEST VIRGINIA..........	198	513	289	153	71	140	177	50	45	82
EAST SOUTH CENTRAL.....	1,633	3,959	2,270	895	794	1,336	1,965	499	396	1,070
ALABAMA................	469	971	552	176	243	355	475	81	97	297
KENTUCKY...............	219	944	532	231	181	411	508	107	118	283
MISSISSIPPI............	222	631	285	270	76	219	307	64	45	198
TENNESSEE..............	723	1,413	901	218	294	351	675	247	136	292
WEST SOUTH CENTRAL.....	3,780	6,101	3,401	1,503	1,197	1,946	2,767	698	584	1,485
ARKANSAS...............	65	504	193	218	93	158	279	93	45	141
LOUISIANA..............	513	1,131	589	285	257	146	438	91	122	225
OKLAHOMA...............	490	788	402	217	169	205	375	100	120	155
TEXAS..................	2,712	3,678	2,217	783	678	1,437	1,675	414	297	964
MOUNTAIN...............	3,358	4,789	2,819	1,335	635	2,104	2,390	461	666	1,263
ARIZONA................	554	877	478	249	150	493	453	98	116	239
COLORADO...............	876	1,581	1,057	295	229	752	889	129	213	547
IDAHO..................	244	355	121	210	24	137	104	13	37	54
MONTANA................	88	442	272	131	39	71	135	25	47	63
NEW MEXICO.............	922	489	272	116	101	180	186	28	62	96
NEVADA.................	69	117	62	50	5	77	150	39	68	43
UTAH...................	543	734	484	169	81	301	322	47	105	170
WYOMING................	62	194	73	115	6	93	151	82	18	51
PACIFIC................	7,979	12,022	7,507	2,366	2,149	6,353	7,050	1,671	1,563	3,816
ALASKA.................	39	120	75	33	12	52	56	*	22	34
CALIFORNIA.............	6,638	8,014	5,243	1,199	1,572	4,947	5,021	1,221	1,018	2,782
HAWAII.................	64	488	283	131	74	119	320	56	74	190
OREGON.................	235	1,303	745	435	123	436	536	116	173	247
WASHINGTON.............	948	1,826	1,041	485	300	751	941	216	246	479
U.S. POSSESSIONS......	55	271	120	83	68	48	176	62	30	84

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-18. MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY GEOGRAPHIC DIVISION, STATE, AND FIELD: 1977

GEOGRAPHIC DIVISION AND STATE	TOTAL	PHYSICAL SCIENTISTS			...MATH. SCIENTISTS....			COMPUTER SPECIALISTS	ENVIRONMENTAL SCIENTISTS			
		TOTAL	CHEMISTS	PHYSICISTS/ ASTRON.	TOTAL	MATH.	STAT.		TOTAL	EARTH SCI.	OCEAN.	ATMOS. SCI.
TOTAL..................	25,600	26,600	26,600	26,500	23,300	23,100	25,100	25,800	25,800	25,900	24,100	28,300
NEW ENGLAND.............	24,800	26,400	26,200	26,600	22,000	21,900	**	24,300	25,500	26,500	22,100	33,200
CONNECTICUT............	25,600	28,100	28,100	28,000	23,100	23,300	**	**	**	**	**	**
MAINE..................	20,600	**	**	**	**	**	**	**	**	**	**	**
MASSACHUSETTS..........	25,300	26,700	26,200	27,500	23,200	23,000	**	24,200	26,500	26,700	**	**
NEW HAMPSHIRE..........	21,400	**	**	**	**	**	**	**	**	**	**	**
RHODE ISLAND...........	25,500	25,200	**	**	**	**	**	**	**	**	**	**
VERMONT................	20,500	**	**	**	**	**	**	**	**	**	**	**
MIDDLE ATLANTIC.........	26,800	28,100	28,400	27,000	24,600	24,200	29,500	29,200	25,700	25,900	**	**
NEW JERSEY.............	29,200	28,500	28,600	28,400	25,600	24,800	**	30,500	25,600	**	**	**
NEW YORK...............	26,200	28,500	29,100	27,400	24,300	24,000	**	28,500	25,900	26,600	**	**
PENNSYLVANIA...........	26,200	26,500	26,700	25,600	24,600	24,500	**	28,000	25,500	25,500	**	**
EAST NORTH CENTRAL......	25,200	25,600	26,000	24,600	22,800	22,500	25,500	25,200	24,200	24,100	**	**
ILLINOIS...............	25,000	26,500	25,800	28,100	23,400	23,300	**	26,500	23,100	23,300	**	**
INDIANA................	25,500	25,900	27,000	24,300	22,400	22,500	**	**	**	**	**	**
MICHIGAN...............	26,100	27,900	29,500	24,300	24,700	24,300	**	24,600	24,100	**	**	**
OHIO...................	25,200	25,300	25,500	24,700	22,300	22,000	**	25,300	26,700	26,800	**	**
WISCONSIN..............	23,500	21,400	22,400	20,400	21,300	20,900	**	**	23,100	23,000	**	**
WEST NORTH CENTRAL......	23,800	24,700	25,100	23,700	21,600	21,400	**	23,300	24,600	24,300	**	**
IOWA...................	24,100	22,100	22,000	**	21,200	20,900	**	**	**	**	**	**
KANSAS.................	23,300	23,000	23,800	**	23,200	**	**	**	**	**	**	**
MINNESOTA..............	25,300	25,300	25,600	24,300	23,900	23,500	**	**	**	**	**	**
MISSOURI...............	23,200	27,200	27,200	**	20,500	20,600	**	**	22,000	23,200	**	**
NORTH DAKOTA...........	23,300	**	**	**	**	**	**	**	**	**	**	**
NEBRASKA...............	22,600	22,600	**	**	**	**	**	**	**	**	**	**
SOUTH DAKOTA...........	21,200	**	**	**	**	**	**	**	**	**	**	**
SOUTH ATLANTIC..........	26,500	27,500	27,400	27,700	23,700	23,600	25,600	26,400	27,900	27,200	29,100	29,100
DELAWARE...............	30,900	32,300	32,500	**	**	**	**	**	**	**	**	**
DISTRICT OF COLUMBIA..	31,900	30,300	29,600	30,800	28,500	28,500	**	**	34,600	35,600	**	**
FLORIDA................	23,600	23,600	23,800	23,100	21,700	19,900	**	**	22,100	21,800	**	**
GEORGIA................	23,100	22,200	22,000	22,400	22,500	21,800	**	**	**	**	**	**
MARYLAND...............	26,900	27,600	25,400	28,800	24,500	24,300	**	20,000	26,900	23,100	**	**
NORTH CAROLINA.........	23,700	26,200	26,800	21,900	21,600	20,800	**	**	22,300	**	**	**
SOUTH CAROLINA.........	23,200	24,800	25,100	**	**	**	**	**	**	**	**	**
VIRGINIA...............	25,900	25,100	25,000	25,400	23,900	23,800	**	**	30,300	31,000	**	**
WEST VIRGINIA..........	23,300	26,300	28,200	**	**	**	**	**	**	**	**	**
EAST SOUTH CENTRAL......	23,200	24,200	24,200	24,300	22,100	21,000	**	**	24,200	25,100	**	**
ALABAMA................	23,800	22,400	22,000	24,100	20,400	20,500	**	**	**	**	**	**
KENTUCKY...............	22,600	24,700	24,100	**	20,700	19,900	**	**	**	**	**	**
MISSISSIPPI............	22,000	22,000	22,000	**	**	**	**	**	**	**	**	**
TENNESSEE..............	23,700	24,900	25,400	23,000	23,500	23,000	**	**	**	**	**	**
WEST SOUTH CENTRAL......	24,900	25,900	26,700	24,300	22,900	22,700	**	25,300	26,700	26,700	**	**
ARKANSAS...............	22,700	24,200	**	**	**	**	**	**	**	**	**	**
LOUISIANA..............	22,800	22,600	22,800	**	23,300	23,400	**	**	20,900	**	**	**
OKLAHOMA...............	24,900	27,400	28,000	**	**	**	**	**	26,300	26,200	**	**
TEXAS..................	25,800	26,300	27,700	24,600	22,700	22,500	**	28,000	28,000	27,800	**	**
MOUNTAIN................	25,000	26,900	24,800	28,800	23,400	23,700	**	26,500	25,700	25,200	**	30,000
ARIZONA................	25,800	27,000	23,500	27,500	**	**	**	**	24,500	24,800	**	**
COLORADO...............	24,400	26,100	25,800	26,200	23,600	23,000	**	**	28,200	27,700	**	30,600
IDAHO..................	21,800	**	**	**	**	**	**	**	**	**	**	**
MONTANA................	22,800	**	**	**	**	**	**	**	**	**	**	**
NEW MEXICO.............	28,400	30,800	28,600	31,200	24,100	23,800	**	**	26,700	26,700	**	**
NEVADA.................	22,600	**	**	**	**	**	**	**	**	**	**	**
UTAH...................	24,700	24,700	24,700	**	**	**	**	**	**	**	**	**
WYOMING................	23,100	**	**	**	**	**	**	**	**	**	**	**
PACIFIC.................	26,000	26,500	26,000	27,200	24,800	24,800	**	26,200	26,100	27,300	24,500	27,400
ALASKA.................	35,000	**	**	**	**	**	**	**	34,300	**	**	**
CALIFORNIA.............	26,600	27,300	26,400	28,400	25,500	25,400	**	27,100	27,300	28,100	24,500	27,400
HAWAII.................	26,100	**	**	**	**	**	**	**	**	**	**	**
OREGON.................	24,500	23,300	25,100	**	24,600	**	**	**	**	**	**	**
WASHINGTON.............	24,400	24,200	24,100	24,300	22,700	22,300	**	**	22,200	**	**	**
U.S. POSSESSIONS......	20,100	**	**	**	**	**	**	**	**	**	**	**

** NO MEDIAN COMPUTED FOR GROUPS WITH FEWER THAN 20 INDIVIDUALS REPORTING SALARY

NOTE: MEDIAN SALARIES COMPUTED ONLY FOR FULL-TIME EMPLOYED CIVILIANS

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 8-18. MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY GEOGRAPHIC DIVISION, STATE, AND FIELD: 1977

GEOGRAPHIC DIVISION AND STATE	ENGI- NEERS	LIFE SCIENTISTS				PSY- CHOL- OGISTS	SOCIAL SCIENTISTS			
		TOTAL	BIOL. SCI.	AGRIC. SCI.	MEDICAL SCI.		TOTAL	ECON- OMISTS	SOCIO/ ANTHRO.	OTHER
TOTAL	28,600	24,700	23,800	24,800	28,000	24,100	24,100	27,000	22,200	23,200
NEW ENGLAND	29,100	23,700	23,100	23,400	27,300	23,100	22,900	25,100	23,100	21,200
CONNECTICUT	27,500	24,900	24,200	**	30,600	24,800	22,900	22,300	22,900	24,200
MAINE	**	22,600	21,800	**	**	**	**	**	**	**
MASSACHUSETTS	30,000	23,800	23,000	**	25,800	23,200	24,300	26,900	24,200	22,300
NEW HAMPSHIRE	**	21,500	18,900	**	**	**	18,900	**	**	**
RHODE ISLAND	**	25,000	24,000	**	**	**	20,600	**	**	**
VERMONT	**	20,400	**	**	**	**	**	**	**	**
MIDDLE ATLANTIC	30,000	25,600	24,700	26,500	30,000	25,100	24,800	28,300	22,800	24,800
NEW JERSEY	30,600	30,000	27,700	29,000	34,800	29,500	22,700	21,800	20,500	25,100
NEW YORK	30,100	25,200	24,700	25,100	27,600	24,400	24,700	28,900	23,000	24,700
PENNSYLVANIA	28,700	24,800	23,300	26,500	29,100	25,000	26,100	29,300	23,300	25,000
EAST NORTH CENTRAL	27,300	25,200	24,400	25,700	27,600	23,800	23,800	25,900	23,000	22,700
ILLINOIS	26,200	24,600	24,300	23,500	26,900	22,900	24,200	26,700	23,700	22,200
INDIANA	27,300	26,300	24,600	27,900	28,800	22,700	24,400	**	23,100	24,100
MICHIGAN	28,600	26,300	25,400	26,300	28,300	24,700	24,200	25,300	26,600	22,800
OHIO	28,300	24,600	24,000	25,500	26,200	23,100	23,800	25,800	22,600	22,700
WISCONSIN	26,100	24,500	24,200	24,900	26,100	24,500	22,000	**	18,700	22,700
WEST NORTH CENTRAL	26,100	23,900	23,000	23,700	26,900	23,400	22,000	25,900	20,000	20,900
IOWA	26,500	25,000	23,400	24,400	29,600	24,600	22,700	**	**	**
KANSAS	25,000	23,800	23,500	**	**	22,400	22,700	**	**	22,500
MINNESOTA	27,200	26,000	24,400	26,800	34,000	24,700	22,000	**	**	19,300
MISSOURI	25,500	23,100	22,800	23,100	25,000	21,800	21,300	**	18,600	20,600
NORTH DAKOTA	**	23,300	**	**	**	**	**	**	**	**
NEBRASKA	**	21,500	20,700	22,100	20,600	**	22,100	**	**	**
SOUTH DAKOTA	**	20,700	21,500	**	**	**	**	**	**	**
SOUTH ATLANTIC	29,700	25,500	24,500	25,600	29,900	24,400	26,100	30,300	22,100	25,300
DELAWARE	31,700	27,200	24,900	**	**	**	**	**	**	**
DISTRICT OF COLUMBIA	35,000	31,200	28,100	33,100	30,400	33,600	33,300	34,900	27,000	31,800
FLORIDA	26,000	24,200	23,500	23,500	26,100	22,300	21,100	**	20,300	20,900
GEORGIA	26,600	23,700	22,800	23,400	29,200	23,400	21,000	**	**	19,400
MARYLAND	28,600	28,800	26,400	27,700	32,700	26,700	24,300	**	24,500	22,800
NORTH CAROLINA	24,900	24,300	23,700	23,200	26,700	20,500	21,400	**	20,400	21,100
SOUTH CAROLINA	26,700	22,500	20,000	**	**	18,800	22,100	**	**	**
VIRGINIA	30,700	23,300	22,800	22,500	26,600	25,600	24,800	28,000	**	23,800
WEST VIRGINIA	**	21,300	20,900	**	**	**	**	**	**	**
EAST SOUTH CENTRAL	27,000	22,700	21,100	24,100	25,900	22,200	22,100	24,800	21,100	21,400
ALABAMA	28,600	23,100	20,900	**	29,500	21,900	23,200	**	**	22,000
KENTUCKY	23,900	21,600	20,300	24,100	24,200	22,100	22,500	**	**	22,800
MISSISSIPPI	25,500	22,400	23,700	21,600	**	20,500	21,300	**	**	**
TENNESSEE	28,900	22,900	22,100	**	25,700	23,200	21,400	**	**	20,300
WEST SOUTH CENTRAL	28,400	24,000	22,700	24,400	26,400	23,300	22,600	25,800	20,500	21,700
ARKANSAS	**	22,700	20,900	**	**	**	23,600	**	**	**
LOUISIANA	26,800	21,900	20,700	22,700	24,300	**	20,100	**	**	18,300
OKLAHOMA	28,000	24,100	22,100	26,300	25,700	23,700	22,200	**	**	**
TEXAS	28,800	25,000	23,900	25,200	26,900	24,300	23,000	28,100	20,500	22,400
MOUNTAIN	28,100	23,500	22,600	23,800	27,300	23,100	22,900	25,300	23,400	22,400
ARIZONA	28,300	23,800	25,200	23,900	20,900	24,500	25,800	**	**	**
COLORADO	28,700	23,600	22,400	25,500	29,600	23,100	22,000	**	22,100	21,600
IDAHO	27,400	22,500	**	23,600	**	**	**	**	**	**
MONTANA	**	22,600	21,600	**	**	**	**	**	**	**
NEW MEXICO	29,600	23,200	21,500	**	**	**	**	**	**	**
NEVADA	**	**	**	**	**	**	**	**	**	**
UTAH	26,100	24,500	24,500	**	**	22,100	28,300	**	**	**
WYOMING	**	22,600	**	**	**	**	**	**	**	**
PACIFIC	28,900	24,900	24,100	25,300	25,800	24,900	24,800	27,800	22,400	24,500
ALASKA	**	**	**	**	**	**	**	**	**	**
CALIFORNIA	29,700	25,000	24,100	25,600	26,500	25,300	24,900	27,500	22,000	24,800
HAWAII	**	25,500	25,900	**	**	**	28,500	**	**	**
OREGON	**	25,200	25,100	25,100	**	24,500	24,200	**	**	24,700
WASHINGTON	27,300	23,400	22,200	24,900	24,500	20,900	24,600	**	**	22,900
U.S. POSSESSIONS	**	19,900	**	**	**	**	18,900	**	**	**

** NO MEDIAN COMPUTED FOR GROUPS WITH FEWER THAN 20 INDIVIDUALS REPORTING SALARY

NOTE: MEDIAN SALARIES COMPUTED ONLY FOR FULL-TIME EMPLOYED CIVILIANS

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-19. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SEX, AND ACADEMIC RANK: 1977

FIELD AND SEX	TOTAL	PROFESSOR	ASSOCIATE PROFESSOR	ASSISTANT PROFESSOR	INSTRUCTOR	LECTURER	OTHER	NO REPORT
ALL FIELDS								
TOTAL	115,621	45,406	35,795	29,143	1,062	1,448	1,359	1,408
MEN	103,711	43,211	32,439	23,949	800	955	1,205	1,152
WOMEN	11,910	2,195	3,356	5,194	262	493	154	256
PHYSICAL SCIENTISTS								
TOTAL	17,734	8,065	5,142	3,523	192	234	324	254
MEN	16,728	7,831	4,856	3,187	156	167	308	223
WOMEN	1,006	234	286	336	36	67	16	31
CHEMISTS								
TOTAL	9,999	4,561	2,734	2,130	160	131	161	122
MEN	9,205	4,367	2,507	1,868	131	89	150	93
WOMEN	794	194	227	262	29	42	11	29
PHYSICISTS/ASTRONOMERS								
TOTAL	7,735	3,504	2,408	1,393	32	103	163	132
MEN	7,523	3,464	2,349	1,319	25	78	158	130
WOMEN	212	40	59	74	7	25	5	2
MATHEMATICAL SCIENTISTS								
TOTAL	10,844	3,811	3,744	2,791	232	160	64	42
MEN	10,078	3,636	3,548	2,487	190	125	55	37
WOMEN	766	175	196	304	42	35	9	5
MATHEMATICIANS								
TOTAL	9,759	3,412	3,453	2,417	220	155	62	40
MEN	9,077	3,249	3,269	2,164	178	125	55	37
WOMEN	682	163	184	253	42	30	7	3
STATISTICIANS								
TOTAL	1,085	399	291	374	12	5	2	2
MEN	1,001	387	279	323	12	*	*	*
WOMEN	84	12	12	51	*	5	2	2
COMPUTER SPECIALISTS								
TOTAL	1,573	550	509	461	*	21	10	22
MEN	1,491	537	498	406	*	19	10	21
WOMEN	82	13	11	55	*	2	*	1
ENVIRONMENTAL SCIENTISTS								
TOTAL	4,254	1,866	1,275	979	3	39	64	28
MEN	4,125	1,848	1,256	902	*	34	61	24
WOMEN	129	18	19	77	3	5	3	4
EARTH SCIENTISTS								
TOTAL	3,397	1,516	1,006	771	3	21	52	28
MEN	3,293	1,501	994	704	*	19	51	24
WOMEN	104	15	12	67	3	2	1	4
OCEANOGRAPHERS								
TOTAL	446	142	168	110	*	16	10	*
MEN	438	142	165	106	*	15	10	*
WOMEN	8	*	3	4	*	1	*	*
ATMOSPHERIC SCIENTISTS								
TOTAL	411	208	101	98	*	2	2	*
MEN	394	205	97	92	*	*	*	*
WOMEN	17	3	4	6	*	2	2	*
ENGINEERS								
TOTAL	11,463	5,434	3,712	1,997	22	89	78	131
MEN	11,407	5,421	3,703	1,965	22	89	77	130
WOMEN	56	13	9	32	*	*	1	1
LIFE SCIENTISTS								
TOTAL	29,470	11,023	8,883	7,815	292	350	579	528
MEN	25,818	10,346	7,869	6,282	202	202	487	430
WOMEN	3,652	677	1,014	1,533	90	148	92	98
BIOLOGICAL SCIENTISTS								
TOTAL	19,830	7,133	5,941	5,582	212	277	334	351
MEN	16,969	6,617	5,211	4,303	142	150	272	274
WOMEN	2,861	516	730	1,279	70	127	62	77
AGRICULTURAL SCIENTISTS								
TOTAL	4,943	2,174	1,478	1,095	*	8	107	81
MEN	4,861	2,164	1,449	1,065	*	6	96	81
WOMEN	82	10	29	30	*	2	11	*

* NO CASES REPORTED

TABLE 8-19. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS
CONTINUED BY FIELD, SEX, AND ACADEMIC RANK: 1977

FIELD AND SEX	TOTAL	PROFESSOR	ASSOCIATE PROFESSOR	ASSISTANT PROFESSOR	INSTRUCTOR	LECTURER	OTHER	NO REPORT
MEDICAL SCIENTISTS								
TOTAL....................	4,697	1,716	1,464	1,138	80	65	138	96
MEN....................	3,988	1,565	1,209	914	60	46	119	75
WOMEN..................	709	151	255	224	20	19	19	21
PSYCHOLOGISTS.............								
TOTAL....................	12,991	4,605	3,950	3,830	166	160	94	186
MEN....................	10,398	4,164	3,251	2,626	104	73	76	104
WOMEN..................	2,593	441	699	1,204	62	87	18	82
SOCIAL SCIENTISTS								
TOTAL....................	27,292	10,052	8,580	7,747	155	395	146	217
MEN....................	23,666	9,428	7,458	6,094	126	246	131	183
WOMEN..................	3,626	624	1,122	1,653	29	149	15	34
ECONOMISTS								
TOTAL....................	6,473	2,677	2,016	1,601	6	59	59	53
MEN....................	5,983	2,565	1,856	1,418	6	33	56	49
WOMEN..................	490	112	160	183	2	26	3	4
SOCIOLOGISTS/ANTHRO.								
TOTAL....................	6,777	2,284	2,110	2,279	34	42	24	4
MEN....................	5,299	2,041	1,616	1,571	32	21	18	*
WOMEN..................	1,478	243	494	708	2	21	6	4
OTHER SOCIAL SCIENTISTS								
TOTAL....................	14,042	5,091	4,454	3,867	113	294	63	160
MEN....................	12,384	4,822	3,986	3,105	88	192	57	134
WOMEN..................	1,658	269	468	762	25	102	6	26

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-20. MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SALARY BASE, AND ACADEMIC RANK: 1977

FIELD AND SALARY BASE	TOTAL	PROFESSOR	ASSOCIATE PROFESSOR	ASSISTANT PROFESSOR	INSTRUCTOR	LECTURER	OTHER	NO REPORT
ALL FIELDS								
ACADEMIC YEAR...........	18,800	24,000	18,400	15,100	12,100	14,600	**	**
CALENDAR YEAR...........	24,200	29,800	23,500	19,000	16,300	17,300	18,800	19,400
PHYSICAL SCIENTISTS								
ACADEMIC YEAR...........	18,900	22,800	18,000	14,700	**	**	**	**
CALENDAR YEAR...........	24,000	29,400	22,400	18,400	**	**	**	**
CHEMISTS								
ACADEMIC YEAR...........	18,400	22,000	17,800	14,800	**	**	**	**
CALENDAR YEAR...........	24,000	28,000	22,900	18,300	**	**	**	**
PHYSICISTS/ASTRONOMERS								
ACADEMIC YEAR...........	19,600	24,400	18,200	14,600	**	**	**	**
CALENDAR YEAR...........	24,200	30,200	21,900	18,700	**	**	**	**
MATHEMATICAL SCIENTISTS								
ACADEMIC YEAR...........	18,500	24,200	18,200	14,900	12,500	**	**	**
CALENDAR YEAR...........	21,800	28,300	20,400	17,400	**	**	**	**
MATHEMATICIANS								
ACADEMIC YEAR...........	18,400	24,000	18,200	14,900	12,400	**	**	**
CALENDAR YEAR...........	21,900	28,100	19,900	17,000	**	**	**	**
STATISTICIANS								
ACADEMIC YEAR...........	18,700	25,500	18,700	14,600	**	**	**	**
CALENDAR YEAR...........	21,600	**	**	**	**	**	**	**
COMPUTER SPECIALISTS								
ACADEMIC YEAR...........	19,300	25,500	19,700	15,500	**	**	**	**
CALENDAR YEAR...........	26,500	**	**	**	**	**	**	**
ENVIRONMENTAL SCIENTISTS								
ACADEMIC YEAR...........	18,600	24,000	17,800	15,000	**	**	**	**
CALENDAR YEAR...........	24,600	30,100	23,400	**	**	**	**	**
EARTH SCIENTISTS								
ACADEMIC YEAR...........	18,600	23,800	17,500	14,800	**	**	**	**
CALENDAR YEAR...........	23,500	28,500	21,600	**	**	**	**	**
OCEANOGRAPHERS								
ACADEMIC YEAR...........	18,500	**	**	**	**	**	**	**
CALENDAR YEAR...........	25,300	**	**	**	**	**	**	**
ATMOSPHERIC SCIENTISTS								
ACADEMIC YEAR...........	20,100	**	**	**	**	**	**	**
CALENDAR YEAR...........	27,900	**	**	**	**	**	**	**
ENGINEERS								
ACADEMIC YEAR...........	21,300	25,000	19,900	16,400	**	**	**	**
CALENDAR YEAR...........	26,800	32,200	24,600	19,900	**	**	**	**
LIFE SCIENTISTS								
ACADEMIC YEAR...........	18,000	22,900	17,900	14,900	**	**	**	**
CALENDAR YEAR...........	24,200	29,600	23,900	19,600	16,900	**	19,700	**
BIOLOGICAL SCIENTISTS								
ACADEMIC YEAR...........	17,900	22,600	17,700	14,800	**	**	**	**
CALENDAR YEAR...........	24,100	30,300	24,100	19,700	16,700	**	19,300	**
AGRICULTURAL SCIENTISTS								
ACADEMIC YEAR...........	18,400	23,600	18,600	**	**	**	**	**
CALENDAR YEAR...........	23,400	26,100	22,200	19,100	**	**	**	**
MEDICAL SCIENTISTS								
ACADEMIC YEAR...........	20,000	24,800	19,300	15,300	**	**	**	**
CALENDAR YEAR...........	26,300	32,300	25,700	20,300	**	**	**	**
PSYCHOLOGISTS..............								
ACADEMIC YEAR...........	18,300	24,400	18,200	14,600	**	**	**	**
CALENDAR YEAR...........	22,200	27,700	22,300	18,500	**	**	**	**
SOCIAL SCIENTISTS								
ACADEMIC YEAR...........	18,700	24,500	18,500	15,200	**	**	**	**
CALENDAR YEAR...........	23,700	29,600	22,000	16,500	**	**	**	**
ECONOMISTS								
ACADEMIC YEAR...........	20,600	25,300	19,900	16,500	**	**	**	**
CALENDAR YEAR...........	25,100	30,900	24,800	19,500	**	**	**	**
SOCIOLOGISTS/ANTHRO.								
ACADEMIC YEAR...........	18,100	24,100	18,400	15,000	**	**	**	**
CALENDAR YEAR...........	20,600	29,000	21,300	15,200	**	**	**	**
OTHER SOCIAL SCIENTISTS								
ACADEMIC YEAR...........	18,300	24,100	18,100	14,900	**	**	**	**
CALENDAR YEAR...........	23,000	29,200	20,600	15,900	**	**	**	**

** NO MEDIAN COMPUTED FOR GROUPS WITH FEWER THAN 20 INDIVIDUALS REPORTING SALARY

NOTE: INCLUDES INDIVIDUALS REPORTING TEACHING AS THEIR PRIMARY OR SECONDARY WORK ACTIVITY
MEDIAN SALARIES COMPUTED ONLY FOR FULL-TIME EMPLOYED CIVILIANS.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-21. NUMBER OF WOMEN DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, RACE, AND EMPOLOYMENT STATUS: 1977

FIELD AND RACE	TOTAL	EMPLOYED FULL-TIME			EMPLOYED PART-TIME			POST-DOC-TORAL	UNEMP/ SEEKING EMP.	UNEMP/ NOT SEEKING EMP.	RE-TIRED	OTHER	NO REPORT
		TOTAL	SCI/ ENG.	OTHER/ UNKNOWN FIELD	TOTAL	SCI/ ENG.	OTHER/ UNKNOWN FIELD						
ALL FIELDS													
TOTAL	31,673	22,080	19,936	2,144	3,405	2,992	413	2,017	978	1,493	1,331	110	259
WHITE	28,123	19,654	17,745	1,909	3,089	2,713	376	1,642	830	1,344	1,259	99	206
BLACK	557	461	399	62	28	23	5	32	13	3	7	2	11
AM. INDIAN/ALSKN NATIVE	69	60	53	7	5	3	2	2	1	1	*	*	*
ASIAN/PACIFIC ISLANDER.	1,510	925	861	64	84	77	7	304	96	82	4	2	13
NO REPORT	1,414	980	878	102	199	176	23	37	38	63	61	7	29
PHYSICAL SCIENTISTS													
TOTAL	3,532	2,286	1,991	295	307	242	65	315	165	250	178	9	22
WHITE	2,987	1,944	1,697	247	267	210	57	244	116	216	171	7	22
BLACK	40	37	27	10	*	*	*	3	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	378	215	201	14	22	19	3	65	42	28	4	2	*
NO REPORT	127	90	66	24	18	13	5	3	7	6	3	*	*
CHEMISTS													
TOTAL	2,871	1,859	1,609	250	228	176	52	267	128	221	144	7	17
WHITE	2,382	1,548	1,343	205	193	149	44	207	87	188	137	5	17
BLACK	32	29	21	8	*	*	*	3	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	341	200	187	13	20	17	3	54	34	27	4	2	*
NO REPORT	116	82	58	24	15	10	5	3	7	6	3	*	*
PHYSICISTS/ASTRONOMERS													
TOTAL	661	427	382	45	79	66	13	48	37	29	34	2	5
WHITE	605	396	354	42	74	61	13	37	29	28	34	2	5
BLACK	8	8	6	2	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	37	15	14	1	2	2	*	11	8	1	*	*	*
NO REPORT	11	8	8	*	3	3	*	*	*	*	*	*	*
MATHEMATICAL SCIENTISTS													
TOTAL	1,209	912	847	65	127	118	9	9	34	37	76	8	6
WHITE	1,056	803	746	57	103	94	9	7	28	29	72	8	6
BLACK	17	17	17	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	73	47	45	2	12	12	*	*	6	8	*	*	*
NO REPORT	63	45	39	6	12	12	*	2	*	*	4	*	*
MATHEMATICIANS													
TOTAL	1,091	821	756	65	104	95	9	9	32	35	76	8	6
WHITE	948	720	663	57	82	73	9	7	26	27	72	8	6
BLACK	17	17	17	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	63	39	37	2	10	10	*	*	6	8	*	*	*
NO REPORT	63	45	39	6	12	12	*	2	*	*	4	*	*
STATISTICIANS													
TOTAL	118	91	91	*	23	23	*	*	2	2	*	*	*
WHITE	108	83	83	*	21	21	*	*	2	2	*	*	*
BLACK	*	*	*	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	10	8	8	*	2	2	*	*	*	*	*	*	*
NO REPORT	*	*	*	*	*	*	*	*	*	*	*	*	*
COMPUTER SPECIALISTS													
TOTAL	236	220	218	2	13	13	*	*	*	*	*	3	*
WHITE	197	181	179	2	13	13	*	*	*	*	*	3	*
BLACK	*	*	*	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	2	2	2	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	24	24	24	*	*	*	*	*	*	*	*	*	*
NO REPORT	13	13	13	*	*	*	*	*	*	*	*	*	*
ENVIRONMENTAL SCIENTISTS													
TOTAL	490	342	336	6	64	62	2	33	16	18	17	*	*
WHITE	449	316	310	6	63	61	2	22	16	18	14	*	*
BLACK	*	*	*	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	24	16	16	*	1	1	*	7	*	*	*	*	*
NO REPORT	17	10	10	*	*	*	*	4	*	*	3	*	*
EARTH SCIENTISTS													
TOTAL	337	220	214	6	49	47	2	24	13	15	16	*	*
WHITE	307	205	199	6	48	46	2	13	13	15	13	*	*
BLACK	*	*	*	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	15	7	7	*	1	1	*	7	*	*	*	*	*
NO REPORT	15	8	8	*	*	*	*	4	*	*	3	*	*
OCEANOGRAPHERS													
TOTAL	82	64	64	*	8	8	*	3	3	3	1	*	*
WHITE	79	61	61	*	8	8	*	3	3	3	1	*	*
BLACK	*	*	*	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	1	1	1	*	*	*	*	*	*	*	*	*	*
NO REPORT	2	2	2	*	*	*	*	*	*	*	*	*	*
ATMOSPHERIC SCIENTISTS													
TOTAL	71	58	58	*	7	7	*	6	*	*	*	*	*
WHITE	63	50	50	*	7	7	*	6	*	*	*	*	*
BLACK	*	*	*	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	8	8	8	*	*	*	*	*	*	*	*	*	*
NO REPORT	*	*	*	*	*	*	*	*	*	*	*	*	*
ENGINEERS													
TOTAL	319	247	243	4	21	21	*	15	7	15	8	1	5
WHITE	258	204	200	4	15	15	*	10	5	13	5	1	5
BLACK	2	2	2	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	42	29	29	*	4	4	*	5	2	2	*	*	*
NO REPORT	17	12	12	*	2	2	*	*	*	*	3	*	*

* NO CASES REPORTED

TABLE B-21. NUMBER OF WOMEN DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, RACE, AND EMPOLOYMENT STATUS: 1977
CONTINUED

FIELD AND RACE	TOTAL	EMPLOYED FULL-TIME TOTAL	SCI/ ENG.	OTHER/ UNKNOWN FIELD	EMPLOYED PART-TIME TOTAL	SCI/ ENG.	OTHER/ UNKNOWN FIELD	POST-DOC-TORAL	UNEMP/ SEEKING EMP.	UNEMP/ NOT SEEKING EMP.	RE-TIRED	OTHER	NO REPORT
LIFE SCIENTISTS													
TOTAL......................	10,759	6,810	6,341	469	844	773	71	1,329	328	771	550	44	83
WHITE..................	9,459	6,030	5,610	420	782	720	62	1,063	283	683	504	42	72
BLACK..................	166	125	115	10	5	5	*	19	6	3	6	2	*
AM. INDIAN/ALSKN NATIVE	15	10	10	*	2	*	2	2	*	1	*	*	*
ASIAN/PACIFIC ISLANDER.	738	401	374	27	27	23	4	221	34	44	*	*	11
NO REPORT.............	381	244	232	12	28	25	3	24	5	40	40	*	*
BIOLOGICAL SCIENTISTS													
TOTAL......................	8,257	4,923	4,506	417	601	551	50	1,160	305	655	509	37	67
WHITE..................	7,272	4,365	3,989	376	558	517	41	944	262	587	465	35	56
BLACK..................	125	91	81	10	*	*	*	17	6	3	6	2	*
AM. INDIAN/ALSKN NATIVE	13	8	8	*	2	*	2	2	*	1	*	*	*
ASIAN/PACIFIC ISLANDER.	555	290	266	24	23	19	4	175	32	24	*	*	11
NO REPORT.............	292	169	162	7	18	15	3	22	5	40	38	*	*
AGRICULTURAL SCIENTISTS													
TOTAL......................	293	202	192	10	40	32	8	22	7	20	2	*	*
WHITE..................	241	176	171	5	40	32	8	11	7	5	2	*	*
BLACK..................	2	2	2	*	*	*	*	*	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	1	1	1	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	33	7	7	*	*	*	*	11	*	15	*	*	*
NO REPORT.............	16	16	11	5	*	*	*	*	*	*	*	*	*
MEDICAL SCIENTISTS													
TOTAL......................	2,209	1,685	1,643	42	203	190	13	147	16	96	39	7	16
WHITE..................	1,946	1,489	1,450	39	184	171	13	108	14	91	37	7	16
BLACK..................	39	32	32	*	5	5	*	2	*	*	*	*	*
AM. INDIAN/ALSKN NATIVE	1	1	1	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	150	104	101	3	4	4	*	35	2	5	*	*	*
NO REPORT.............	73	59	59	*	10	10	*	2	*	*	2	*	*
PSYCHOLOGISTS..............													
TOTAL......................	8,482	6,023	5,544	479	1,447	1,307	140	175	197	245	284	21	90
WHITE..................	7,686	5,417	4,978	439	1,329	1,201	128	161	174	230	284	16	75
BLACK..................	190	166	147	19	10	7	3	8	6	*	*	*	*
AM. INDIAN/ALSKN NATIVE	40	37	34	3	3	3	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	100	86	83	3	3	3	*	6	5	*	*	*	*
NO REPORT.............	466	317	302	15	102	93	9	*	12	15	*	5	15
SOCIAL SCIENTISTS													
TOTAL......................	6,646	5,240	4,416	824	582	456	126	141	231	157	218	24	53
WHITE..................	6,031	4,759	4,025	734	517	399	118	135	208	155	209	22	26
BLACK..................	142	114	91	23	13	11	2	2	1	*	1	*	11
AM. INDIAN/ALSKN NATIVE	12	11	7	4	*	*	*	*	1	*	*	*	*
ASIAN/PACIFIC ISLANDER.	131	107	89	18	15	15	*	*	7	*	*	*	2
NO REPORT.............	330	249	204	45	37	31	6	4	14	2	8	2	14
ECONOMISTS													
TOTAL......................	885	728	638	90	48	41	7	12	2	19	68	*	8
WHITE..................	821	676	588	88	45	38	7	12	2	17	61	*	8
BLACK..................	9	8	8	*	*	*	*	*	*	*	1	*	*
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	17	14	14	*	3	3	*	*	*	*	*	*	*
NO REPORT.............	38	30	28	2	*	*	*	*	*	2	6	*	*
SOCIOLOGISTS/ANTHRO.													
TOTAL......................	2,567	2,018	1,804	214	216	169	47	52	128	43	71	13	26
WHITE..................	2,302	1,825	1,642	183	177	130	47	46	119	43	71	11	10
BLACK..................	61	39	25	14	9	9	*	2	*	*	*	*	11
AM. INDIAN/ALSKN NATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*
ASIAN/PACIFIC ISLANDER.	50	45	37	8	5	5	*	*	*	*	*	*	*
NO REPORT.............	154	109	100	9	25	25	*	4	9	*	*	2	5
OTHER SOCIAL SCIENTISTS													
TOTAL......................	3,194	2,494	1,974	520	318	246	72	77	101	95	79	11	19
WHITE..................	2,908	2,258	1,795	463	295	231	64	77	87	95	77	11	8
BLACK..................	72	67	58	9	4	2	2	*	1	*	*	*	*
AM. INDIAN/ALSKN NATIVE	12	11	7	4	*	*	*	*	1	*	*	*	*
ASIAN/PACIFIC ISLANDER.	64	48	38	10	7	7	*	*	7	*	*	*	2
NO REPORT.............	138	110	76	34	12	6	6	*	5	*	2	*	9

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-22. NUMBER OF WOMEN DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND TYPE OF EMPLOYER: 1977

FIELD	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
TOTAL....................	31,673	2,959	18,773	17,144	927	702	1,958	1,445	1,273	47	495	345	23	4,171	184
PHYSICAL SCIENTISTS........	3,532	633	1,790	1,573	157	60	61	165	222	4	12	2	*	624	19
CHEMISTS..................	2,871	548	1,433	1,240	138	55	52	140	149	4	8	2	*	517	18
PHYSICISTS/ASTRONOMERS...	661	85	357	333	19	5	9	25	73	*	4	*	*	107	1
MATHEMATICAL SCIENTISTS...	1,209	53	936	861	55	20	*	30	24	*	5	*	*	161	*
MATHEMATICIANS...........	1,091	39	841	768	53	20	*	28	21	*	5	*	*	157	*
STATISTICIANS............	118	14	95	93	2	*	*	2	3	*	*	*	*	4	*
COMPUTER SPECIALISTS......	236	102	106	106	*	*	2	9	5	3	2	4	*	3	*
ENVIRONMENTAL SCIENTISTS..	490	79	266	249	14	3	*	22	56	*	16	*	*	51	*
EARTH SCIENTISTS..........	337	50	185	169	13	3	*	14	33	*	11	*	*	44	*
OCEANOGRAPHERS............	82	13	41	40	1	*	*	6	15	*	*	*	*	7	*
ATMOSPHERIC SCIENTISTS...	71	16	40	40	*	*	*	2	8	*	5	*	*	*	*
ENGINEERS.................	319	120	111	109	2	*	2	15	32	2	1	*	*	36	*
LIFE SCIENTISTS...........	10,759	563	6,597	6,279	283	35	440	500	550	34	138	85	*	1,776	76
BIOLOGICAL SCIENTISTS....	8,257	336	5,175	4,885	257	33	224	377	412	14	54	36	*	1,573	56
AGRICULTURAL SCIENTISTS..	293	40	174	165	7	2	*	18	21	*	9	2	*	29	*
MEDICAL SCIENTISTS.......	2,209	187	1,248	1,229	19	*	216	105	117	20	75	47	*	174	20
PSYCHOLOGISTS.............	8,482	1,167	4,213	3,487	202	524	1,426	343	137	*	171	145	*	837	43
SOCIAL SCIENTISTS.........	6,646	242	4,754	4,480	214	60	27	361	247	4	150	109	23	683	46
ECONOMISTS...............	885	67	570	566	4	*	*	46	80	*	*	5	17	97	3
SOCIOLOGISTS/ANTHRO......	2,567	45	1,987	1,874	102	11	14	129	37	*	37	19	*	281	18
OTHER SOCIAL SCIENTISTS..	3,194	130	2,197	2,040	108	49	13	186	130	4	113	85	6	305	25

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-23. NUMBER OF WOMEN DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND PRIMARY WORK ACTIVITY: 1977

FIELD	TOTAL	RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....				TEACHING	CONSULTING	SALES/ PROF. SERVICES	OTHER	NOT EMPLOYED	NO REPORT
		TOTAL	BASIC RESEARCH	APPL'D RESEARCH	DEVELOPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH						
TOTAL....................	31,673	7,594	5,434	1,755	405	3,438	1,234	1,696	508	10,396	495	3,222	1,652	4,171	705
PHYSICAL SCIENTISTS........	3,532	1,217	779	360	78	333	175	117	41	1,056	13	51	178	624	60
CHEMISTS..................	2,871	945	600	290	55	278	145	100	33	873	11	36	156	517	55
PHYSICISTS/ASTRONOMERS...	661	272	179	70	23	55	30	17	8	183	2	15	22	107	5
MATHEMATICAL SCIENTISTS...	1,209	176	106	49	21	51	13	28	10	743	15	*	37	161	26
MATHEMATICIANS...........	1,091	157	102	34	21	43	8	26	9	663	11	*	34	157	26
STATISTICIANS............	118	19	4	15	*	8	5	2	1	80	4	*	3	4	*
COMPUTER SPECIALISTS......	236	91	20	16	55	33	19	8	6	71	6	2	28	3	2
ENVIRONMENTAL SCIENTISTS..	490	202	127	66	9	64	49	13	2	116	7	7	29	51	14
EARTH SCIENTISTS..........	337	111	61	44	6	44	29	13	2	100	3	5	18	44	12
OCEANOGRAPHERS............	82	46	34	12	*	17	17	*	*	4	*	*	8	7	*
ATMOSPHERIC SCIENTISTS...	71	45	32	10	3	3	3	*	*	12	4	2	3	*	2
ENGINEERS.................	319	146	24	88	34	53	36	17	*	50	7	*	22	36	5
LIFE SCIENTISTS...........	10,759	4,077	3,476	522	79	1,069	419	488	162	2,737	105	257	563	1,776	175
BIOLOGICAL SCIENTISTS....	8,257	3,369	3,031	275	63	537	186	266	85	2,174	59	73	355	1,573	117
AGRICULTURAL SCIENTISTS..	293	103	55	48	*	58	29	16	13	59	*	2	39	29	3
MEDICAL SCIENTISTS.......	2,209	605	390	199	16	474	204	206	64	504	46	182	169	174	55
PSYCHOLOGISTS.............	8,482	776	444	285	47	1,005	272	624	109	2,270	302	2,772	285	837	235
SOCIAL SCIENTISTS.........	6,646	909	458	369	82	830	251	401	178	3,353	40	133	510	683	188
ECONOMISTS...............	885	145	17	128	*	97	43	34	20	421	15	17	84	97	9
SOCIOLOGISTS/ANTHRO......	2,567	347	190	132	25	236	70	96	70	1,391	2	45	179	281	86
OTHER SOCIAL SCIENTISTS..	3,194	417	251	109	57	497	138	271	88	1,541	23	71	247	305	93

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-24. NUMBER OF WOMEN DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND YEARS OF PROFESSIONAL EXPERIENCE: 1977

		YEARS OF PROFESSIONAL EXPERIENCE										
FIELD	TOTAL	1 OR LESS YEARS	2-4 YEARS	5-9 YEARS	10-14 YEARS	15-19 YEARS	20-24 YEARS	25-29 YEARS	30-34 YEARS	35-39 YEARS	40 OR MORE YEARS	NO REPORT
TOTAL....................	31,673	1,275	6,633	8,422	4,878	2,953	2,232	1,659	1,242	711	608	1,060
PHYSICAL SCIENTISTS........	3,532	181	777	851	554	297	287	178	159	84	67	97
CHEMISTS..................	2,871	158	644	659	454	254	215	153	132	74	44	84
PHYSICISTS/ASTRONOMERS...	661	23	133	192	100	43	72	25	27	10	23	13
MATHEMATICAL SCIENTISTS...	1,209	58	211	304	178	123	91	75	53	28	59	29
MATHEMATICIANS............	1,091	55	187	260	165	106	83	71	51	28	56	29
STATISTICIANS.............	118	3	24	44	13	17	8	4	2	*	3	*
COMPUTER SPECIALISTS......	236	5	71	52	54	17	23	5	4	2	3	*
ENVIRONMENTAL SCIENTISTS..	490	26	118	145	85	30	28	9	21	14	5	9
EARTH SCIENTISTS..........	337	14	73	96	64	24	25	2	15	10	5	9
OCEANOGRAPHERS............	82	10	21	31	13	1	1	*	1	4	*	*
ATMOSPHERIC SCIENTISTS...	71	2	24	18	8	5	2	7	5	*	*	*
ENGINEERS.................	319	13	84	88	36	32	26	8	7	*	5	20
LIFE SCIENTISTS...........	10,759	594	2,347	2,756	1,404	1,014	683	666	410	293	165	427
BIOLOGICAL SCIENTISTS....	8,257	484	1,898	2,143	1,069	752	448	462	297	242	123	339
AGRICULTURAL SCIENTISTS..	293	15	60	60	48	21	44	24	8	4	*	9
MEDICAL SCIENTISTS.......	2,209	95	389	553	287	241	191	180	105	47	42	79
PSYCHOLOGISTS.............	8,482	248	1,776	2,247	1,357	805	676	429	346	123	153	322
SOCIAL SCIENTISTS.........	6,646	150	1,249	1,979	1,210	635	418	289	242	167	151	156
ECONOMISTS................	885	4	130	275	139	72	67	44	52	49	22	31
SOCIOLOGISTS/ANTHRO......	2,567	37	455	829	544	227	155	97	78	48	44	53
OTHER SOCIAL SCIENTISTS..	3,194	109	664	875	527	336	196	148	112	70	85	72

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-25. MEDIAN ANNUAL SALARIES OF WOMEN DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND RACE: 1977

		RACE				
FIELD	TOTAL	WHITE	BLACK	AMERICAN INDIAN	ASIAN	NO REPORT
TOTAL....................	20,700	20,600	22,600	**	20,500	22,000
PHYSICAL SCIENTISTS........	21,200	21,300	**	**	20,500	20,800
CHEMISTS..................	20,900	20,900	**	**	20,500	20,100
PHYSICISTS/ASTRONOMERS...	23,100	23,100	**	**	**	**
MATHEMATICAL SCIENTISTS...	19,900	19,400	**	**	20,600	**
MATHEMATICIANS............	19,900	19,300	**	**	**	**
STATISTICIANS.............	19,800	19,900	**	**	**	**
COMPUTER SPECIALISTS......	20,800	21,500	**	**	**	**
ENVIRONMENTAL SCIENTISTS..	19,700	19,700	**	**	**	**
EARTH SCIENTISTS..........	20,000	19,900	**	**	**	**
OCEANOGRAPHERS............	19,200	19,100	**	**	**	**
ATMOSPHERIC SCIENTISTS...	19,200	19,100	**	**	**	**
ENGINEERS.................	22,900	23,100	**	**	**	**
LIFE SCIENTISTS...........	21,000	20,900	24,000	**	20,700	22,100
BIOLOGICAL SCIENTISTS....	20,500	20,500	24,100	**	20,000	20,600
AGRICULTURAL SCIENTISTS..	20,200	20,800	**	**	**	**
MEDICAL SCIENTISTS.......	22,800	22,600	**	**	25,000	**
PSYCHOLOGISTS.............	20,600	20,500	21,300	**	20,500	23,700
SOCIAL SCIENTISTS.........	20,200	20,100	24,100	**	19,000	20,400
ECONOMISTS................	23,600	23,700	**	**	**	**
SOCIOLOGISTS/ANTHRO......	19,700	19,700	**	**	**	19,900
OTHER SOCIAL SCIENTISTS..	19,800	19,600	24,600	**	19,500	20,600

** NO MEDIAN COMPUTED FOR GROUPS WITH FEWER THAN 20 INDIVIDUALS REPORTING SALARY

NOTE: MEDIAN SALARIES COMPUTED ONLY FOR FULL-TIME EMPLOYED CIVILIANS

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 8-26. MEDIAN ANNUAL SALARIES OF WOMEN DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND TYPE OF EMPLOYER: 1977

			EDUCATIONAL INSTITUTIONS												
FIELD	TOTAL	BUSINESS/ INDUSTRY	TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL	HOSPITAL/ CLINIC	NON-PROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
TOTAL....................	20,700	24,400	20,000	20,000	19,700	21,000	21,000	21,100	26,600	**	19,500	21,700	**	**	**
PHYSICAL SCIENTISTS........	21,200	23,800	19,500	19,600	20,000	**	**	21,500	26,200	**	**	**	**	**	**
CHEMISTS..................	20,900	23,600	19,100	19,100	20,000	**	**	20,900	25,500	**	**	**	**	**	**
PHYSICISTS/ASTRONOMERS...	23,100	25,000	20,900	21,200	**	**	**	**	28,800	**	**	**	**	**	**
MATHEMATICAL SCIENTISTS...	19,900	**	19,500	19,800	**	**	**	**	**	**	**	**	**	**	**
MATHEMATICIANS............	19,900	**	19,700	20,000	**	**	**	**	**	**	**	**	**	**	**
STATISTICIANS.............	19,800	**	19,000	19,000	**	**	**	**	**	**	**	**	**	**	**
COMPUTER SPECIALISTS.......	20,800	23,000	19,700	19,700	**	**	**	**	**	**	**	**	**	**	**
ENVIRONMENTAL SCIENTISTS..	19,700	22,400	18,700	18,600	**	**	**	**	23,500	**	**	**	**	**	**
EARTH SCIENTISTS..........	20,000	22,800	18,900	18,800	**	**	**	**	**	**	**	**	**	**	**
OCEANOGRAPHERS............	19,200	**	**	**	**	**	**	**	**	**	**	**	**	**	**
ATMOSPHERIC SCIENTISTS...	19,200	**	**	**	**	**	**	**	**	**	**	**	**	**	**
ENGINEERS..................	22,900	23,400	21,400	21,400	**	**	**	**	**	**	**	**	**	**	**
LIFE SCIENTISTS............	21,000	23,600	20,500	20,600	20,100	**	21,600	20,100	26,200	**	21,600	19,800	**	**	**
BIOLOGICAL SCIENTISTS....	20,500	22,600	20,200	20,200	20,200	**	21,000	20,100	25,600	**	**	**	**	**	**
AGRICULTURAL SCIENTISTS..	20,200	**	20,300	20,300	**	**	**	**	**	**	**	**	**	**	**
MEDICAL SCIENTISTS........	22,800	25,700	22,300	22,400	**	**	22,300	22,000	28,600	**	**	**	**	**	**
PSYCHOLOGISTS..............	20,600	25,600	19,700	19,300	19,300	22,200	21,000	21,600	26,100	**	19,900	23,200	**	**	**
SOCIAL SCIENTISTS..........	20,200	26,200	19,800	19,800	19,700	**	**	21,100	28,600	**	17,500	**	**	**	**
ECONOMISTS................	23,600	26,800	21,800	21,800	**	**	**	**	30,700	**	**	**	**	**	**
SOCIOLOGISTS/ANTHRO.......	19,700	**	19,500	19,500	**	**	**	**	**	**	**	**	**	**	**
OTHER SOCIAL SCIENTISTS..	19,800	**	19,600	19,600	**	**	**	17,800	28,200	**	**	**	**	**	**

** NO MEDIAN COMPUTED FOR GROUPS WITH FEWER THAN 20 INDIVIDUALS REPORTING SALARY

NOTE: MEDIAN SALARIES COMPUTED ONLY FOR FULL-TIME EMPLOYED CIVILIANS

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 8-27. MEDIAN ANNUAL SALARIES OF WOMEN DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND PRIMARY WORK ACTIVITY: 1977

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
FIELD	TOTAL	TOTAL	BASIC RESEARCH	APPL'D RESEARCH	DEVELOPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACHING	CONSULTING	SALES/ PROF. SERVICES	OTHER	NOT EMPLOYED	NO REPORT
TOTAL....................	20,700	21,000	20,600	22,200	20,500	25,100	26,300	24,100	25,500	19,500	22,300	21,200	20,500	**	20,300
PHYSICAL SCIENTISTS........	21,200	22,600	21,500	23,600	22,200	25,700	27,100	26,200	**	18,800	**	**	20,800	**	**
CHEMISTS..................	20,900	22,100	21,300	23,100	**	25,200	25,700	26,100	**	18,700	**	**	20,600	**	**
PHYSICISTS/ASTRONOMERS...	23,100	23,900	23,100	25,500	**	29,000	**	**	**	19,900	**	**	**	**	**
MATHEMATICAL SCIENTISTS...	19,900	22,000	19,500	**	**	24,800	**	**	**	19,100	**	**	**	**	**
MATHEMATICIANS............	19,900	20,700	19,400	**	**	24,000	**	**	**	19,100	**	**	**	**	**
STATISTICIANS.............	19,800	**	**	**	**	**	**	**	**	18,900	**	**	**	**	**
COMPUTER SPECIALISTS.......	20,800	22,500	**	**	21,500	**	**	**	**	19,400	**	**	**	**	**
ENVIRONMENTAL SCIENTISTS..	19,700	21,100	20,000	23,200	**	21,700	**	**	**	18,800	**	**	**	**	**
EARTH SCIENTISTS..........	20,000	21,700	21,500	**	**	**	**	**	**	18,800	**	**	**	**	**
OCEANOGRAPHERS............	19,200	**	**	**	**	**	**	**	**	**	**	**	**	**	**
ATMOSPHERIC SCIENTISTS...	19,200	**	**	**	**	**	**	**	**	**	**	**	**	**	**
ENGINEERS..................	22,900	23,000	**	23,200	**	**	**	**	**	21,000	**	**	**	**	**
LIFE SCIENTISTS............	21,000	20,700	20,600	21,100	**	25,500	27,900	24,100	26,800	20,300	22,300	23,100	20,800	**	**
BIOLOGICAL SCIENTISTS....	20,500	20,500	20,400	21,300	**	24,600	27,100	23,900	**	20,000	**	**	20,700	**	**
AGRICULTURAL SCIENTISTS..	20,200	20,300	**	**	**	**	**	**	**	**	**	**	**	**	**
MEDICAL SCIENTISTS........	22,800	21,500	21,900	21,200	**	27,500	28,300	24,200	**	21,800	**	28,000	21,200	**	**
PSYCHOLOGISTS..............	20,600	19,900	18,800	21,100	**	24,400	26,700	23,600	**	19,000	22,200	21,300	21,100	**	20,600
SOCIAL SCIENTISTS..........	20,200	20,700	20,700	21,500	**	24,400	22,900	24,700	25,200	19,500	**	**	17,900	**	**
ECONOMISTS................	23,600	24,800	**	24,100	**	26,800	**	**	**	21,400	**	**	**	**	**
SOCIOLOGISTS/ANTHRO.......	19,700	20,100	20,600	**	**	23,200	**	**	**	19,300	**	**	17,500	**	**
OTHER SOCIAL SCIENTISTS..	19,800	19,600	19,800	19,400	**	24,500	21,300	25,200	**	19,000	**	**	16,900	**	**

** NO MEDIAN COMPUTED FOR GROUPS WITH FEWER THAN 20 INDIVIDUALS REPORTING SALARY

NOTE: MEDIAN SALARIES COMPUTED ONLY FOR FULL-TIME EMPLOYED CIVILIANS

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-28. MEDIAN ANNUAL SALARIES OF WOMEN DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND YEARS OF PROFESSIONAL EXPERIENCE: 1977

		YEARS OF PROFESSIONAL EXPERIENCE										
FIELD	TOTAL	1 OR LESS YEARS	2-4 YEARS	5-9 YEARS	10-14 YEARS	15-19 YEARS	20-24 YEARS	25-29 YEARS	30-34 YEARS	35-39 YEARS	40 OR MORE YEARS	NO REPORT
TOTAL....................	20,700	15,700	17,600	19,500	22,200	23,600	25,400	25,800	26,600	26,100	25,100	20,200
PHYSICAL SCIENTISTS.......	21,200	19,000	18,200	19,200	21,600	23,800	26,600	25,800	22,500	**	**	**
CHEMISTS.................	20,900	**	18,000	19,400	20,900	23,700	25,600	25,300	21,000	**	**	**
PHYSICISTS/ASTRONOMERS...	23,100	**	19,600	18,900	23,800	**	29,000	**	**	**	**	**
MATHEMATICAL SCIENTISTS...	19,900	**	17,300	18,500	21,500	23,000	22,500	26,700	**	**	**	**
MATHEMATICIANS...........	19,900	**	17,200	18,400	21,300	22,100	22,200	26,700	**	**	**	**
STATISTICIANS............	19,800	**	**	**	**	**	**	**	**	**	**	**
COMPUTER SPECIALISTS......	20,800	**	18,200	19,500	23,600	**	**	**	**	**	**	**
ENVIRONMENTAL SCIENTISTS..	19,700	**	17,800	19,200	20,500	**	**	**	**	**	**	**
EARTH SCIENTISTS.........	20,000	**	**	19,400	21,600	**	**	**	**	**	**	**
OCEANOGRAPHERS...........	19,200	**	**	**	**	**	**	**	**	**	**	**
ATMOSPHERIC SCIENTISTS...	19,200	**	**	**	**	**	**	**	**	**	**	**
ENGINEERS.................	22,900	**	20,800	22,900	**	**	**	**	**	**	**	**
LIFE SCIENTISTS...........	21,000	17,000	17,900	19,800	22,500	23,100	25,300	25,900	28,900	24,200	**	18,500
BIOLOGICAL SCIENTISTS....	20,500	**	17,400	19,300	22,300	23,000	25,000	25,800	28,700	24,500	**	**
AGRICULTURAL SCIENTISTS..	20,200	**	**	**	**	**	**	**	**	**	**	**
MEDICAL SCIENTISTS.......	22,800	**	20,000	20,900	24,100	23,000	26,200	28,500	28,500	**	**	**
PSYCHOLOGISTS.............	20,600	**	17,600	19,900	23,300	24,100	26,100	25,300	26,300	26,600	**	21,600
SOCIAL SCIENTISTS.........	20,200	**	17,100	19,000	20,900	23,700	24,100	26,200	26,400	31,000	**	**
ECONOMISTS...............	23,600	**	19,000	22,000	23,700	24,900	**	**	**	**	**	**
SOCIOLOGISTS/ANTHRO......	19,700	**	17,500	18,700	20,700	24,300	23,000	**	**	**	**	**
OTHER SOCIAL SCIENTISTS..	19,800	**	16,400	18,500	20,500	22,500	24,600	26,000	26,500	**	**	**

** NO MEDIAN COMPUTED FOR GROUPS WITH FEWER THAN 20 INDIVIDUALS REPORTING SALARY

NOTE: MEDIAN SALARIES COMPUTED ONLY FOR FULL-TIME EMPLOYED CIVILIANS

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-29. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SUPPORTING AGENCY, AND TYPE OF EMPLOYER: 1977

			EDUCATIONAL INSTITUTIONS												
FIELD AND SUPPORTING AGENCY	TOTAL	BUSINESS/ INDUSTRY	TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL	HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
ALL FIELDS															
TOTAL....................	303,267	71,464	63,101	156,452	4,634	2,015	8,587	10,188	21,353	2,282	3,783	1,545	584	19,030	1,350
TOTAL SUPPORTED.........	119,627	15,712	66,308	65,374	495	439	4,393	6,891	21,344	2,282	1,805	692	167	*	33
NASA....................	7,142	1,888	3,408	3,393	*	15	4	273	1,537	30	2	*	*	*	*
NSF.....................	17,434	470	15,530	15,468	62	*	15	887	466	6	32	22	*	*	6
EPA.....................	5,148	1,040	2,319	2,267	37	15	6	399	920	58	265	141	*	*	*
ERDA....................	16,116	4,484	8,279	8,210	69	*	10	2,117	1,149	18	26	33	*	*	*
NRC.....................	1,678	433	563	563	*	*	*	392	263	18	9	*	*	*	*
AID.....................	1,393	119	806	793	13	*	6	128	286	10	6	*	32	*	*
HEW, TOTAL..............	38,357	1,653	27,298	26,664	220	414	2,640	2,409	2,817	503	708	317	6	*	6
NIH.....................	28,117	826	21,893	21,849	22	22	1,501	1,690	1,530	225	329	123	*	*	*
ALCOHOL/DRUG ABUSE&MHA	3,852	237	1,779	1,762	*	17	1,026	206	265	56	141	142	*	*	*
OE......................	2,692	229	2,094	1,589	149	356	60	147	34	*	45	57	6	*	*
OTHER HEW...............	5,568	538	2,655	2,513	49	93	277	521	1,013	242	242	74	*	*	6
DOD.....................	21,718	7,372	5,925	5,909	15	1	111	1,130	5,515	1,637	7	*	*	*	21
COMMERCE................	3,293	321	941	941	*	*	*	228	1,537	34	194	32	6	*	*
USDA....................	12,924	201	8,385	8,364	21	*	*	91	4,046	*	164	37	*	*	*
DOT.....................	1,975	540	745	745	*	*	6	189	327	16	111	41	*	*	*
JUSTICE.................	1,028	154	417	395	12	10	27	158	140	*	84	48	*	*	*
HUD.....................	776	186	286	280	*	6	20	95	82	6	42	59	*	*	*
INTERIOR................	4,724	416	2,116	2,099	12	5	15	168	1,817	*	145	33	14	*	*
OTHER...................	8,886	739	3,072	3,015	35	22	1,605	625	2,389	26	197	140	93	*	*
SOURCE UNKNOWN..........	1,173	168	652	576	71	5	137	37	100	*	21	30	28	*	*
SOURCE NOT REPORTED....	831	125	534	518	1	15	46	56	*	30	20	14	6	*	*
SUPPORT STATUS UNKNOWN..	7,483	627	5,700	5,001	478	221	661	103	*	*	204	168	16	*	4
NOT SUPPORTED...........	152,662	54,041	89,265	84,395	3,549	1,321	3,396	3,097	9	*	1,724	647	390	*	93
NO REPORT...............	4,465	1,084	1,828	1,682	112	34	137	97	*	*	50	38	11	*	1,220
NOT EMPLOYED............	19,030	*	*	*	*	*	*	*	*	*	*	*	*	19,030	*
PHYSICAL SCIENTISTS															
TOTAL....................	62,055	22,980	27,081	25,544	1,297	240	542	2,031	3,941	275	213	63	28	4,605	296
TOTAL SUPPORTED.........	22,166	3,517	12,467	12,304	146	17	241	1,624	3,941	275	83	16	11	*	11
NASA....................	2,422	492	1,223	1,223	*	*	*	118	569	18	2	*	*	*	*
NSF.....................	5,163	87	4,568	4,539	29	*	5	332	165	6	*	*	*	*	*
EPA.....................	785	128	244	226	18	*	*	158	224	*	15	16	*	*	*
ERDA....................	6,742	1,404	4,012	3,957	55	*	10	829	461	18	8	*	*	*	*
NRC.....................	292	40	123	123	*	*	*	37	74	18	*	*	*	*	*
AID.....................	40	*	22	22	*	*	*	13	*	*	*	*	5	*	*
HEW, TOTAL..............	4,272	174	3,098	3,048	33	17	99	385	426	76	14	*	*	*	*
NIH.....................	3,657	137	2,790	2,785	5	*	78	366	240	34	12	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	142	23	61	61	*	*	3	37	18	*	*	*	*	*	*
OE......................	200	6	194	149	28	17	*	*	*	*	*	*	*	*	*
OTHER HEW...............	419	20	134	134	*	*	18	17	174	54	2	*	*	*	*
DOD.....................	5,291	1,721	1,662	1,652	10	*	14	249	1,454	180	*	*	*	*	11
COMMERCE................	689	11	100	100	*	*	*	24	554	*	*	*	*	*	*
USDA....................	538	*	173	163	10	*	*	8	347	*	10	*	*	*	*
DOT.....................	127	13	35	35	*	*	*	32	47	*	*	*	*	*	*
JUSTICE.................	53	*	16	16	*	*	*	13	2	*	22	*	*	*	*
HUD.....................	40	*	*	*	*	*	*	26	14	*	*	*	*	*	*
INTERIOR................	195	19	88	77	11	*	*	25	63	*	*	*	*	*	*
OTHER...................	648	70	231	227	4	*	150	21	159	*	12	*	5	*	*
SOURCE UNKNOWN..........	160	50	80	60	20	*	*	*	30	*	*	*	*	*	*
SOURCE NOT REPORTED....	130	33	72	71	1	*	*	*	*	19	*	*	6	*	*
SUPPORT STATUS UNKNOWN..	876	135	680	573	87	20	10	31	*	*	20	*	*	*	*
NOT SUPPORTED...........	33,367	18,954	13,588	12,367	1,024	197	289	347	*	*	130	44	9	*	6
NO REPORT...............	1,041	374	346	300	40	6	2	29	*	*	*	3	8	*	279
NOT EMPLOYED............	4,605	*	*	*	*	*	*	*	*	*	*	*	*	4,605	*
CHEMISTS															
TOTAL....................	40,650	18,664	14,792	13,698	893	201	446	1,048	1,810	118	184	48	14	3,336	190
TOTAL SUPPORTED.........	10,225	1,387	5,875	5,772	86	17	207	745	1,810	118	61	16	6	*	*
NASA....................	614	153	303	303	*	*	*	29	109	18	2	*	*	*	*
NSF.....................	2,162	40	1,990	1,990	*	*	5	84	37	6	*	*	*	*	*
EPA.....................	619	107	167	149	18	*	*	152	162	*	15	16	*	*	*
ERDA....................	2,232	627	1,049	1,021	28	*	10	289	231	18	8	*	*	*	*
NRC.....................	116	10	55	55	*	*	*	18	15	18	*	*	*	*	*
AID.....................	25	*	12	12	*	*	*	13	*	*	*	*	*	*	*
HEW, TOTAL..............	3,848	157	2,774	2,724	33	17	99	366	384	56	12	*	*	*	*
NIH.....................	3,356	130	2,528	2,523	5	*	78	347	227	34	12	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	142	23	61	61	*	*	3	37	18	*	*	*	*	*	*
OE......................	153	6	147	102	28	17	*	*	*	*	*	*	*	*	*
OTHER HEW...............	330	10	106	106	*	*	18	17	145	34	*	*	*	*	*
DOD.....................	1,816	510	729	729	*	*	14	125	376	62	*	*	*	*	*
COMMERCE................	281	11	78	78	*	*	*	13	179	*	*	*	*	*	*
USDA....................	528	*	173	163	10	*	*	8	337	*	10	*	*	*	*
DOT.....................	97	*	21	21	*	*	*	29	47	*	*	*	*	*	*
JUSTICE.................	53	*	16	16	*	*	*	13	2	*	22	*	*	*	*
HUD.....................	27	*	*	*	*	*	*	26	11	*	*	*	*	*	*
INTERIOR................	173	19	66	55	11	*	*	25	63	*	*	*	*	*	*
OTHER...................	387	19	133	129	4	*	116	18	89	*	12	*	*	*	*
SOURCE UNKNOWN..........	108	34	52	45	7	*	*	*	22	*	*	*	*	*	*
SOURCE NOT REPORTED....	85	33	46	45	1	*	*	*	*	*	*	*	6	*	*
SUPPORT STATUS UNKNOWN..	664	113	492	394	83	15	10	29	*	*	20	*	*	*	*
NOT SUPPORTED...........	25,645	16,834	8,178	7,323	692	163	227	268	*	*	103	29	*	*	6
NO REPORT...............	780	330	247	209	32	6	2	6	*	*	*	3	8	*	184
NOT EMPLOYED............	3,336	*	*	*	*	*	*	*	*	*	*	*	*	3,336	*

* NO CASES REPORTED

TABLE B-29. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SUPPORTING AGENCY, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND SUPPORTING AGENCY	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
PHYSICISTS/ASTRONOMERS															
TOTAL......................	21,405	4,316	12,289	11,846	404	39	96	983	2,131	157	29	15	14	1,269	106
TOTAL SUPPORTED..........	11,941	2,130	6,592	6,532	60	*	34	879	2,131	157	2	*	5	*	11
NASA......................	1,808	339	920	920	*	*	*	89	460	*	*	*	*	*	*
NSF.......................	3,001	47	2,578	2,549	29	*	*	248	128	*	*	*	*	*	*
EPA.......................	166	21	77	77	*	*	*	6	62	*	*	*	*	*	*
ERDA......................	4,510	777	2,963	2,936	27	*	*	540	230	*	*	*	*	*	*
NRC.......................	176	30	68	68	*	*	*	19	59	*	*	*	*	*	*
AID.......................	15	*	10	10	*	*	*	*	*	*	*	*	5	*	*
HEW, TOTAL................	424	17	324	324	*	*	*	19	42	20	2	*	*	*	*
NIH.....................	301	7	262	262	*	*	*	19	13	*	*	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OE......................	47	*	47	47	*	*	*	*	*	*	*	*	*	*	*
OTHER HEW...............	89	10	28	28	*	*	*	*	29	20	2	*	*	*	*
DOD.......................	3,475	1,211	933	923	10	*	*	124	1,078	118	*	*	*	*	11
COMMERCE..................	408	*	22	22	*	*	*	11	375	*	*	*	*	*	*
USDA......................	10	*	*	*	*	*	*	*	10	*	*	*	*	*	*
DOT.......................	30	13	14	14	*	*	*	3	*	*	*	*	*	*	*
JUSTICE...................	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HUD.......................	3	*	*	*	*	*	*	*	3	*	*	*	*	*	*
INTERIOR..................	22	*	22	22	*	*	*	*	*	*	*	*	*	*	*
OTHER.....................	261	51	98	98	*	*	34	3	70	*	*	*	5	*	*
SOURCE UNKNOWN............	52	16	28	15	13	*	*	*	8	*	*	*	*	*	*
SOURCE NOT REPORTED.......	45	*	26	26	*	*	*	*	*	19	*	*	*	*	*
SUPPORT STATUS UNKNOWN..	212	22	188	179	4	5	*	2	*	*	*	*	*	*	*
NOT SUPPORTED............	7,722	2,120	5,410	5,044	332	34	62	79	*	*	27	15	9	*	*
NO REPORT................	261	44	99	91	8	*	*	23	*	*	*	*	*	*	95
NOT EMPLOYED.............	1,269	*	*	*	*	*	*	*	*	*	*	*	*	1,269	*
MATHEMATICAL SCIENTISTS															
TOTAL......................	15,406	1,282	12,228	11,774	360	94	*	261	593	50	23	28	11	833	97
TOTAL SUPPORTED..........	3,264	427	1,935	1,892	29	14	*	234	593	50	11	4	*	*	10
NASA......................	134	40	73	73	*	*	*	*	21	*	*	*	*	*	*
NSF.......................	1,231	3	1,147	1,143	4	*	*	50	31	*	*	*	*	*	*
EPA.......................	39	2	28	28	*	*	*	*	9	*	*	*	*	*	*
ERDA......................	305	81	139	139	*	*	*	85	*	*	*	*	*	*	*
NRC.......................	48	4	24	24	*	*	*	20	*	*	*	*	*	*	*
AID.......................	8	*	8	8	*	*	*	*	*	*	*	*	*	*	*
HEW, TOTAL................	276	10	229	193	27	9	*	18	8	*	11	*	*	*	*
NIH.....................	106	*	94	94	*	*	*	12	*	*	*	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	22	*	9	9	*	*	*	2	*	*	11	*	*	*	*
OE......................	102	8	85	58	18	9	*	9	*	*	*	*	*	*	*
OTHER HEW...............	87	2	72	54	9	9	*	5	8	*	*	*	*	*	*
DOD.......................	1,185	289	374	374	*	*	*	125	337	50	*	*	*	*	10
COMMERCE..................	85	3	31	31	*	*	*	7	44	*	*	*	*	*	*
USDA......................	82	11	37	37	*	*	*	*	34	*	*	*	*	*	*
DOT.......................	50	*	9	9	*	*	*	2	39	*	*	*	*	*	*
JUSTICE...................	23	*	*	*	*	*	*	*	19	*	*	4	*	*	*
HUD.......................	15	*	*	*	*	*	*	5	10	*	*	*	*	*	*
INTERIOR..................	21	*	20	15	*	5	*	*	1	*	*	*	*	*	*
OTHER.....................	165	21	74	74	*	*	*	*	70	*	*	*	*	*	*
SOURCE UNKNOWN............	27	15	12	12	*	*	*	*	*	*	*	*	*	*	*
SOURCE NOT REPORTED.......	16	13	3	3	*	*	*	*	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN..	494	9	478	436	31	11	*	7	*	*	*	*	*	*	*
NOT SUPPORTED............	10,601	833	9,705	9,352	284	69	*	20	*	*	10	22	11	*	*
NO REPORT................	214	13	110	94	16	*	*	*	*	*	2	2	*	*	87
NOT EMPLOYED.............	833	*	*	*	*	*	*	*	*	*	*	*	*	833	*
MATHEMATICIANS															
TOTAL......................	13,665	996	11,018	10,566	358	94	*	221	438	50	12	28	*	805	97
TOTAL SUPPORTED..........	2,639	318	1,625	1,582	29	14	*	194	438	50	*	4	*	*	10
NASA......................	63	16	42	42	*	*	*	*	5	*	*	*	*	*	*
NSF.......................	1,145	3	1,070	1,066	4	*	*	41	31	*	*	*	*	*	*
EPA.......................	13	*	13	13	*	*	*	*	*	*	*	*	*	*	*
ERDA......................	195	45	86	86	*	*	*	64	*	*	*	*	*	*	*
NRC.......................	23	*	13	13	*	*	*	10	*	*	*	*	*	*	*
AID.......................	8	*	8	8	*	*	*	*	*	*	*	*	*	*	*
HEW, TOTAL................	195	2	177	141	27	9	*	16	*	*	*	*	*	*	*
NIH.....................	73	*	61	61	*	*	*	12	*	*	*	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	9	*	9	9	*	*	*	*	*	*	*	*	*	*	*
OE......................	94	*	85	58	18	9	*	9	*	*	*	*	*	*	*
OTHER HEW...............	60	2	53	35	9	9	*	5	*	*	*	*	*	*	*
DOD.......................	966	253	245	245	*	*	*	125	283	50	*	*	*	*	10
COMMERCE..................	73	3	31	31	*	*	*	*	39	*	*	*	*	*	*
USDA......................	30	*	17	17	*	*	*	*	13	*	*	*	*	*	*
DOT.......................	38	*	9	9	*	*	*	2	27	*	*	*	*	*	*
JUSTICE...................	17	*	*	*	*	*	*	*	13	*	*	4	*	*	*
HUD.......................	5	*	*	*	*	*	*	5	*	*	*	*	*	*	*
INTERIOR..................	5	*	5	*	*	5	*	*	*	*	*	*	*	*	*
OTHER.....................	108	3	61	61	*	*	*	*	44	*	*	*	*	*	*
SOURCE UNKNOWN............	27	15	12	12	*	*	*	*	*	*	*	*	*	*	*
SOURCE NOT REPORTED.......	3	*	3	3	*	*	*	*	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN..	446	9	430	390	29	11	*	7	*	*	*	*	*	*	*
NOT SUPPORTED............	9,581	656	8,873	8,520	284	69	*	20	*	*	10	22	*	*	*
NO REPORT................	194	13	90	74	16	*	*	*	*	*	2	2	*	*	87
NOT EMPLOYED.............	805	*	*	*	*	*	*	*	*	*	*	*	*	805	*

* NO CASES REPORTED

TABLE B-29. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SUPPORTING AGENCY, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND SUPPORTING AGENCY	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL	HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
STATISTICIANS															
TOTAL......................	1,741	286	1,210	1,208	2	*	*	40	155	*	11	*	11	28	*
TOTAL SUPPORTED..........	625	109	310	310	*	*	*	40	155	*	11	*	*	*	*
NASA......................	71	24	31	31	*	*	*	*	16	*	*	*	*	*	*
NSF......................	86	*	77	77	*	*	*	9	*	*	*	*	*	*	*
EPA......................	26	2	15	15	*	*	*	*	9	*	*	*	*	*	*
ERDA......................	110	36	53	53	*	*	*	21	*	*	*	*	*	*	*
NRC......................	25	4	11	11	*	*	*	10	*	*	*	*	*	*	*
AID......................	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HEW, TOTAL..............	81	8	52	52	*	*	*	2	8	*	11	*	*	*	*
NIH......................	33	*	33	33	*	*	*	*	*	*	*	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	13	*	*	*	*	*	*	2	*	*	11	*	*	*	*
OE......................	8	8	*	*	*	*	*	*	*	*	*	*	*	*	*
OTHER HEW..............	27	*	19	19	*	*	*	*	8	*	*	*	*	*	*
DOD......................	219	36	129	129	*	*	*	*	54	*	*	*	*	*	*
COMMERCE..............	12	*	*	*	*	*	*	7	5	*	*	*	*	*	*
USDA......................	52	11	20	20	*	*	*	*	21	*	*	*	*	*	*
DOT......................	12	*	*	*	*	*	*	*	12	*	*	*	*	*	*
JUSTICE..................	6	*	*	*	*	*	*	*	6	*	*	*	*	*	*
HUD......................	10	*	*	*	*	*	*	*	10	*	*	*	*	*	*
INTERIOR..................	16	*	15	15	*	*	*	*	1	*	*	*	*	*	*
OTHER......................	57	18	13	13	*	*	*	*	26	*	*	*	*	*	*
SOURCE UNKNOWN..........	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SOURCE NOT REPORTED....	13	13	*	*	*	*	*	*	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN..	48	*	48	46	2	*	*	*	*	*	*	*	*	*	*
NOT SUPPORTED............	1,020	177	832	832	*	*	*	*	*	*	*	*	11	*	*
NO REPORT................	20	*	20	20	*	*	*	*	*	*	*	*	*	*	*
NOT EMPLOYED............	28	*	*	*	*	*	*	*	*	*	*	*	*	28	*
COMPUTER SPECIALISTS															
TOTAL......................	5,822	3,058	2,128	2,118	10	*	12	159	251	78	69	12	*	55	*
TOTAL SUPPORTED..........	2,196	740	948	948	*	*	2	128	251	78	47	2	*	*	*
NASA......................	228	128	69	69	*	*	*	10	21	*	*	*	*	*	*
NSF......................	416	44	329	329	*	*	*	15	28	*	*	*	*	*	*
EPA......................	52	45	*	*	*	*	*	7	*	*	*	*	*	*	*
ERDA......................	255	52	134	134	*	*	*	69	*	*	*	*	*	*	*
NRC......................	47	23	11	11	*	*	*	13	*	*	*	*	*	*	*
AID......................	22	*	22	22	*	*	*	*	*	*	*	*	*	*	*
HEW, TOTAL..............	236	47	156	156	*	*	2	18	9	*	2	2	*	*	*
NIH......................	170	28	114	114	*	*	2	15	9	*	*	2	*	*	*
ALCOHOL/DRUG ABUSE&MHA	10	10	*	*	*	*	*	*	*	*	*	*	*	*	*
OE......................	2	*	*	*	*	*	*	*	*	*	2	*	*	*	*
OTHER HEW..............	68	17	48	48	*	*	*	3	*	*	*	*	*	*	*
DOD......................	1,119	510	324	324	*	*	*	43	164	78	*	*	*	*	*
COMMERCE..............	24	5	*	*	*	*	*	*	19	*	*	*	*	*	*
USDA......................	24	14	*	*	*	*	*	*	10	*	*	*	*	*	*
DOT......................	33	*	20	20	*	*	*	4	*	*	9	*	*	*	*
JUSTICE..................	32	*	11	11	*	*	*	*	*	*	21	*	*	*	*
HUD......................	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
INTERIOR..................	43	22	21	21	*	*	*	*	*	*	*	*	*	*	*
OTHER......................	86	56	23	23	*	*	*	*	*	*	7	*	*	*	*
SOURCE UNKNOWN..........	26	9	9	9	*	*	*	*	*	*	8	*	*	*	*
SOURCE NOT REPORTED....	6	*	6	6	*	*	*	*	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN..	133	30	101	101	*	*	*	*	*	*	*	2	*	*	*
NOT SUPPORTED............	3,413	2,276	1,066	1,056	10	*	10	31	*	*	22	8	*	*	*
NO REPORT................	25	12	13	13	*	*	*	*	*	*	*	*	*	*	*
NOT EMPLOYED............	55	*	*	*	*	*	*	*	*	*	*	*	*	55	*
ENVIRONMENTAL SCIENTISTS															
TOTAL......................	13,543	3,103	6,312	6,147	125	40	*	520	2,415	108	424	82	14	517	48
TOTAL SUPPORTED..........	6,939	627	3,160	3,140	1	19	*	370	2,415	108	207	46	6	*	*
NASA......................	884	70	501	501	*	*	*	55	258	*	*	*	*	*	*
NSF......................	2,026	26	1,751	1,751	*	*	*	156	77	*	16	*	*	*	*
EPA......................	999	187	346	346	*	*	*	69	255	*	96	46	*	*	*
ERDA......................	1,001	184	527	527	*	*	*	104	151	*	14	21	*	*	*
NRC......................	296	56	120	120	*	*	*	22	89	*	9	*	*	*	*
AID......................	46	*	38	38	*	*	*	8	*	*	*	*	*	*	*
HEW, TOTAL..............	147	8	109	90	*	19	*	8	16	*	6	*	*	*	*
NIH......................	96	8	72	72	*	*	*	*	10	*	6	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OE......................	41	*	33	14	*	19	*	8	*	*	*	*	*	*	*
OTHER HEW..............	23	8	9	9	*	*	*	*	6	*	*	*	*	*	*
DOD......................	1,281	181	554	553	*	1	*	57	415	74	*	*	*	*	*
COMMERCE..............	844	43	249	249	*	*	*	47	406	34	38	21	6	*	*
USDA......................	291	8	127	127	*	*	*	8	127	*	*	21	*	*	*
DOT......................	65	*	31	31	*	*	*	12	1	*	*	21	*	*	*
JUSTICE..................	11	11	*	*	*	*	*	*	*	*	*	*	*	*	*
HUD......................	41	11	1	1	*	*	*	8	*	*	*	21	*	*	*
INTERIOR..................	1,694	116	430	429	1	*	*	21	1,034	*	72	21	*	*	*
OTHER......................	273	33	88	88	*	*	*	34	90	*	7	21	*	*	*
SOURCE UNKNOWN..........	22	7	15	15	*	*	*	*	*	*	*	*	*	*	*
SOURCE NOT REPORTED....	16	9	2	2	*	*	*	5	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN..	200	34	153	121	30	2	*	*	*	*	13	*	*	*	*
NOT SUPPORTED............	5,766	2,429	2,943	2,831	93	19	*	146	*	*	204	36	8	*	*
NO REPORT................	121	13	56	55	1	*	*	4	*	*	*	*	*	*	48
NOT EMPLOYED............	517	*	*	*	*	*	*	*	*	*	*	*	*	517	*

* NO CASES REPORTED

TABLE B-29. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SUPPORTING AGENCY, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND SUPPORTING AGENCY	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
EARTH SCIENTISTS															
TOTAL	10,235	2,700	4,641	4,507	112	22	*	296	1,634	25	331	82	8	470	48
TOTAL SUPPORTED	4,243	393	1,845	1,844	*	1	*	173	1,634	25	127	46	*	*	*
NASA	480	29	287	287	*	*	*	30	134	*	*	*	*	*	*
NSF	944	14	828	828	*	*	*	65	37	*	*	*	*	*	*
EPA	694	134	202	202	*	*	*	46	184	*	82	46	*	*	*
ERDA	667	140	353	353	*	*	*	48	91	*	14	21	*	*	*
NRC	244	52	106	106	*	*	*	8	69	*	9	*	*	*	*
AID	37	*	29	29	*	*	*	8	*	*	*	*	*	*	*
HEW, TOTAL	95	8	67	66	*	1	*	8	6	*	6	*	*	*	*
NIH	62	8	48	48	*	*	*	*	*	*	6	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OE	23	*	15	14	*	1	*	8	*	*	*	*	*	*	*
OTHER HEW	23	8	9	9	*	*	*	*	6	*	*	*	*	*	*
DOD	529	86	175	174	*	1	*	14	241	13	*	*	*	*	*
COMMERCE	265	10	92	92	*	*	*	41	72	12	17	21	*	*	*
USDA	277	*	121	121	*	*	*	8	127	*	*	21	*	*	*
DOT	44	*	10	10	*	*	*	12	1	*	*	21	*	*	*
JUSTICE	11	11	*	*	*	*	*	*	*	*	*	*	*	*	*
HUD	41	11	1	1	*	*	*	8	*	*	*	21	*	*	*
INTERIOR	1,390	75	342	342	*	*	*	21	914	*	17	21	*	*	*
OTHER	173	7	52	52	*	*	*	26	60	*	7	21	*	*	*
SOURCE UNKNOWN	22	7	15	15	*	*	*	*	*	*	*	*	*	*	*
SOURCE NOT REPORTED	14	9	2	2	*	*	*	3	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN	157	22	122	102	18	2	*	*	*	*	13	*	*	*	*
NOT SUPPORTED	5,257	2,274	2,629	2,517	93	19	*	119	*	*	191	36	8	*	*
NO REPORT	108	11	45	44	1	*	*	4	*	*	*	*	*	*	48
NOT EMPLOYED	470	*	*	*	*	*	*	*	*	*	*	*	*	470	*
OCEANOGRAPHERS															
TOTAL	1,592	135	971	940	13	18	*	56	287	45	63	*	6	29	*
TOTAL SUPPORTED	1,216	61	736	717	1	18	*	31	287	45	50	*	6	*	*
NASA	31	8	23	23	*	*	*	*	*	*	*	*	*	*	*
NSF	529	*	488	488	*	*	*	13	28	*	*	*	*	*	*
EPA	113	13	69	69	*	*	*	6	25	*	*	*	*	*	*
ERDA	190	13	117	117	*	*	*	21	39	*	*	*	*	*	*
NRC	6	*	6	6	*	*	*	*	*	*	*	*	*	*	*
AID	9	*	9	9	*	*	*	*	*	*	*	*	*	*	*
HEW, TOTAL	49	*	39	21	*	18	*	*	10	*	*	*	*	*	*
NIH	31	*	21	21	*	*	*	*	10	*	*	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OE	18	*	18	*	*	18	*	*	*	*	*	*	*	*	*
OTHER HEW	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
DOD	343	25	242	242	*	*	*	*	43	33	*	*	*	*	*
COMMERCE	323	23	114	114	*	*	*	6	141	12	21	*	6	*	*
USDA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
DOT	10	*	10	10	*	*	*	*	*	*	*	*	*	*	*
JUSTICE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HUD	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
INTERIOR	218	15	65	64	1	*	*	*	97	*	41	*	*	*	*
OTHER	61	*	36	36	*	*	*	8	17	*	*	*	*	*	*
SOURCE UNKNOWN	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SOURCE NOT REPORTED	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN	20	*	20	8	12	*	*	*	*	*	*	*	*	*	*
NOT SUPPORTED	322	74	210	210	*	*	*	25	*	*	13	*	*	*	*
NO REPORT	5	*	5	5	*	*	*	*	*	*	*	*	*	*	*
NOT EMPLOYED	29	*	*	*	*	*	*	*	*	*	*	*	*	29	*
ATMOSPHERIC SCIENTISTS															
TOTAL	1,716	268	700	700	*	*	*	168	494	38	30	*	*	18	*
TOTAL SUPPORTED	1,480	173	579	579	*	*	*	166	494	38	30	*	*	*	*
NASA	373	33	191	191	*	*	*	25	124	*	*	*	*	*	*
NSF	553	12	435	435	*	*	*	78	12	*	16	*	*	*	*
EPA	192	40	75	75	*	*	*	17	46	*	14	*	*	*	*
ERDA	144	31	57	57	*	*	*	35	21	*	*	*	*	*	*
NRC	46	4	8	8	*	*	*	14	20	*	*	*	*	*	*
AID	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HEW, TOTAL	3	*	3	3	*	*	*	*	*	*	*	*	*	*	*
NIH	3	*	3	3	*	*	*	*	*	*	*	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OTHER HEW	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
DOD	409	70	137	137	*	*	*	43	131	28	*	*	*	*	*
COMMERCE	256	10	43	43	*	*	*	*	193	10	*	*	*	*	*
USDA	14	8	6	6	*	*	*	*	*	*	*	*	*	*	*
DOT	11	*	11	11	*	*	*	*	*	*	*	*	*	*	*
JUSTICE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HUD	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
INTERIOR	86	26	23	23	*	*	*	*	23	*	14	*	*	*	*
OTHER	39	26	*	*	*	*	*	*	13	*	*	*	*	*	*
SOURCE UNKNOWN	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SOURCE NOT REPORTED	2	*	*	*	*	*	*	2	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN	23	12	11	11	*	*	*	*	*	*	*	*	*	*	*
NOT SUPPORTED	187	81	104	104	*	*	*	2	*	*	*	*	*	*	*
NO REPORT	8	2	6	6	*	*	*	*	*	*	*	*	*	*	*
NOT EMPLOYED	18	*	*	*	*	*	*	*	*	*	*	*	*	18	*

* NO CASES REPORTED

TABLE B-29. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SUPPORTING AGENCY, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND SUPPORTING AGENCY	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ CONN. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
ENGINEERS															
TOTAL	46,539	22,870	15,911	15,709	185	17	21	1,551	3,519	686	270	114	23	1,493	81
TOTAL SUPPORTED	21,966	7,584	8,636	8,580	56	*	12	1,311	3,519	686	153	65	*	*	*
NASA	2,793	1,091	1,132	1,132	*	*	*	72	498	*	*	*	*	*	*
NSF	2,539	164	2,293	2,293	*	*	*	23	59	*	*	*	*	*	*
EPA	1,351	497	590	577	13	*	*	51	57	35	70	51	*	*	*
ERDA	5,737	2,493	2,215	2,215	*	*	*	605	412	*	*	12	*	*	*
NRC	706	218	191	191	*	*	*	221	76	*	*	*	*	*	*
AID	159	29	130	117	13	*	*	*	*	*	*	*	*	*	*
HEW, TOTAL	1,332	113	1,036	980	56	*	6	91	83	*	3	*	*	*	*
NIH	1,019	79	862	862	*	*	6	38	34	*	*	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	23	10	13	13	*	*	*	*	*	*	*	*	*	*	*
OE	82	*	66	24	42	*	*	13	*	*	3	*	*	*	*
OTHER HEW	264	24	130	116	14	*	*	61	49	*	*	*	*	*	*
DOD	9,152	4,258	1,922	1,922	*	*	*	504	1,845	623	*	*	*	*	*
COMMERCE	505	134	150	150	*	*	*	62	159	*	*	*	*	*	*
USDA	639	37	497	497	*	*	*	*	105	*	*	*	*	*	*
DOT	1,053	342	442	442	*	*	*	76	147	10	36	*	*	*	*
JUSTICE	61	7	13	13	*	*	*	12	16	*	13	*	*	*	*
HUD	145	88	57	57	*	*	*	*	*	*	*	*	*	*	*
INTERIOR	980	151	640	640	*	*	*	24	153	*	12	*	*	*	*
OTHER	737	170	306	306	*	*	6	48	180	19	8	*	*	*	*
SOURCE UNKNOWN	113	60	33	33	*	*	*	*	18	*	*	2	*	*	*
SOURCE NOT REPORTED	103	44	37	37	*	*	*	*	*	11	11	*	*	*	*
SUPPORT STATUS UNKNOWN	469	159	255	242	13	*	7	7	*	*	21	20	*	*	*
NOT SUPPORTED	22,217	14,876	6,957	6,824	116	17	2	212	*	*	96	29	23	*	22
NO REPORT	394	251	63	63	*	*	*	21	*	*	*	*	*	*	59
NOT EMPLOYED	1,493	*	*	*	*	*	*	*	*	*	*	*	*	1,493	*
LIFE SCIENTISTS															
TOTAL	78,335	10,064	47,471	46,267	1,074	130	2,539	2,442	6,760	739	1,155	306	63	6,411	385
TOTAL SUPPORTED	40,028	1,050	27,628	27,533	74	21	1,341	1,716	6,751	739	622	144	27	*	10
NASA	458	41	276	276	*	*	4	5	120	12	*	*	*	*	*
NSF	4,026	60	3,752	3,723	29	*	10	142	42	*	16	*	*	*	4
EPA	1,609	88	913	907	6	*	6	92	375	23	84	28	*	*	*
ERDA	1,620	176	1,059	1,059	*	*	*	305	76	*	4	*	*	*	*
NRC	146	24	87	87	*	*	*	35	*	*	*	*	*	*	*
AID	605	48	349	349	*	*	6	39	134	10	6	*	13	*	*
HEW, TOTAL	21,484	482	16,454	16,416	17	21	806	1,197	1,726	387	327	99	*	*	6
NIH	18,962	367	15,268	15,263	5	*	683	1,084	1,141	185	196	38	*	*	*
ALCOHOL/DRUG ABUSE&MHA	884	29	559	559	*	*	49	7	102	35	63	40	*	*	*
OE	298	12	259	233	12	14	*	22	*	*	5	*	*	*	*
OTHER HEW	1,959	130	805	795	*	10	90	117	502	175	96	38	*	*	6
DOD	1,366	70	453	448	5	*	43	34	431	328	7	*	*	*	*
COMMERCE	511	27	263	263	*	*	*	39	125	*	57	*	*	*	*
USDA	10,604	106	7,016	7,005	11	*	*	45	3,282	*	139	16	*	*	*
DOT	148	43	57	57	*	*	6	13	11	6	7	5	*	*	*
JUSTICE	57	6	26	26	*	*	*	11	10	*	*	4	*	*	*
HUD	62	14	13	13	*	*	*	4	8	6	5	12	*	*	*
INTERIOR	1,336	68	663	663	*	*	6	51	481	*	55	12	*	*	*
OTHER	1,826	77	651	651	*	*	534	152	373	5	18	3	13	*	*
SOURCE UNKNOWN	346	*	252	246	6	*	35	7	21	*	13	4	14	*	*
SOURCE NOT REPORTED	361	26	291	291	*	*	5	28	*	*	9	2	*	*	*
SUPPORT STATUS UNKNOWN	2,087	97	1,727	1,599	106	22	162	19	*	*	66	12	*	*	4
NOT SUPPORTED	28,559	8,654	17,551	16,611	853	87	990	698	9	*	461	137	33	*	26
NO REPORT	1,250	263	565	524	41	*	46	9	*	*	6	13	3	*	345
NOT EMPLOYED	6,411	*	*	*	*	*	*	*	*	*	*	*	*	6,411	*
BIOLOGICAL SCIENTISTS															
TOTAL	46,788	4,011	30,829	29,849	852	128	1,124	1,686	3,367	334	446	89	3	4,627	272
TOTAL SUPPORTED	23,440	561	16,997	16,930	46	21	713	1,242	3,358	334	209	16	*	*	10
NASA	310	17	218	218	*	*	*	*	63	12	*	*	*	*	*
NSF	3,507	33	3,281	3,252	29	*	10	131	35	*	13	*	*	*	4
EPA	840	72	479	473	6	*	*	60	182	*	47	*	*	*	*
ERDA	1,193	143	789	789	*	*	*	223	34	*	4	*	*	*	*
NRC	125	18	78	78	*	*	*	29	*	*	*	*	*	*	*
AID	116	*	63	63	*	*	*	22	20	5	6	*	*	*	*
HEW, TOTAL	15,089	224	12,080	12,054	5	21	482	885	1,128	157	115	12	*	*	6
NIH	14,138	205	11,618	11,613	5	*	475	842	808	105	76	9	*	*	*
ALCOHOL/DRUG ABUSE&MHA	306	2	243	243	*	*	1	5	36	5	14	*	*	*	*
OE	160	6	132	118	*	14	*	22	*	*	*	*	*	*	*
OTHER HEW	731	13	312	302	*	10	7	24	286	55	25	3	*	*	6
DOD	809	32	281	281	*	*	6	18	301	170	1	*	*	*	*
COMMERCE	319	11	188	188	*	*	*	39	81	*	*	*	*	*	*
USDA	3,056	31	1,772	1,772	*	*	*	24	1,154	*	71	4	*	*	*
DOT	51	12	32	32	*	*	*	*	*	*	7	*	*	*	*
JUSTICE	20	*	14	14	*	*	*	*	6	*	*	*	*	*	*
HUD	19	*	7	7	*	*	*	4	8	*	*	*	*	*	*
INTERIOR	785	56	390	390	*	*	6	51	279	*	3	*	*	*	*
OTHER	857	28	265	265	*	*	260	82	207	5	7	3	*	*	*
SOURCE UNKNOWN	201	*	156	150	6	*	10	7	21	*	7	*	*	*	*
SOURCE NOT REPORTED	237	26	178	178	*	*	5	28	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN	1,148	39	1,001	902	77	22	54	19	*	*	25	6	*	*	4
NOT SUPPORTED	16,751	3,271	12,425	11,630	710	85	339	421	9	*	206	62	*	*	18
NO REPORT	822	140	406	387	19	*	18	4	*	*	6	5	3	*	240
NOT EMPLOYED	4,627	*	*	*	*	*	*	*	*	*	*	*	*	4,627	*

* NO CASES REPORTED

TABLE B-29. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SUPPORTING AGENCY, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND SUPPORTING AGENCY	TOTAL	BUSINESS/INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/UNIV.	2-YEAR COLL.	ELEM/SEC. SCHOOL									
AGRICULTURAL SCIENTISTS TOTAL	15,062	2,858	8,331	8,175	154	2	11	185	2,496	*	310	20	54	769	28
TOTAL SUPPORTED	8,793	189	5,817	5,801	16	*	11	53	2,496	*	188	12	27	*	*
NASA	86	18	36	36	*	*	*	*	32	*	*	*	*	*	*
NSF	365	21	337	337	*	*	*	*	7	*	*	*	*	*	*
EPA	382	*	242	242	*	*	*	*	140	*	*	*	*	*	*
ERDA	191	*	163	163	*	*	*	*	28	*	*	*	*	*	*
NRC	6	*	6	6	*	*	*	*	*	*	*	*	*	*	*
AID	405	42	245	245	*	*	*	10	95	*	*	*	13	*	*
HEW, TOTAL	371	31	283	283	*	*	*	*	57	*	*	*	*	*	*
NIH	172	11	155	155	*	*	*	*	6	*	*	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	6	6	*	*	*	*	*	*	*	*	*	*	*	*	*
OE	57	*	57	57	*	*	*	*	*	*	*	*	*	*	*
OTHER HEW	142	20	71	71	*	*	*	*	51	*	*	*	*	*	*
DOD	132	11	79	74	5	*	*	*	36	*	6	*	*	*	*
COMMERCE	165	10	64	64	*	*	*	*	44	*	47	*	*	*	*
USDA	7,159	63	4,949	4,938	11	*	*	*	2,072	*	63	12	*	*	*
DOT	36	23	13	13	*	*	*	*	*	*	*	*	*	*	*
JUSTICE	11	*	*	*	*	*	*	11	*	*	*	*	*	*	*
HUD	6	*	6	6	*	*	*	*	*	*	*	*	*	*	*
INTERIOR	526	6	260	260	*	*	*	*	196	*	52	12	*	*	*
OTHER	333	25	162	162	*	*	11	32	79	*	11	*	13	*	*
SOURCE UNKNOWN	64	*	50	50	*	*	*	*	*	*	*	*	14	*	*
SOURCE NOT REPORTED	68	*	59	59	*	*	*	*	*	*	9	*	*	*	*
SUPPORT STATUS UNKNOWN	262	19	237	227	10	*	*	*	*	*	*	6	*	*	*
NOT SUPPORTED	5,057	2,592	2,184	2,076	106	2	*	132	*	*	122	*	27	*	*
NO REPORT	181	58	93	71	22	*	*	*	*	*	*	2	*	*	28
NOT EMPLOYED	769	*	*	*	*	*	*	*	*	*	*	*	*	769	*
MEDICAL SCIENTISTS TOTAL	16,485	3,195	8,311	8,243	68	*	1,404	571	897	405	399	197	6	1,015	85
TOTAL SUPPORTED	7,795	300	4,814	4,802	12	*	617	421	897	405	225	116	*	*	*
NASA	62	6	22	22	*	*	4	5	25	*	*	*	*	*	*
NSF	154	6	134	134	*	*	*	11	*	*	3	*	*	*	*
EPA	387	16	192	192	*	*	6	32	53	23	37	28	*	*	*
ERDA	236	33	107	107	*	*	*	82	14	*	*	*	*	*	*
NRC	15	6	3	3	*	*	*	6	*	*	*	*	*	*	*
AID	84	6	41	41	*	*	6	7	19	5	*	*	*	*	*
HEW, TOTAL	6,024	227	4,091	4,079	12	*	324	312	541	230	212	87	*	*	*
NIH	4,652	151	3,495	3,495	*	*	208	242	327	80	120	29	*	*	*
ALCOHOL/DRUG ABUSE&MHA	572	21	316	316	*	*	48	2	66	30	49	40	*	*	*
OE	81	6	70	58	12	*	*	*	*	*	5	*	*	*	*
OTHER HEW	1,086	97	422	422	*	*	83	93	165	120	71	35	*	*	*
DOD	425	27	93	93	*	*	37	16	94	158	*	*	*	*	*
COMMERCE	27	6	11	11	*	*	*	*	*	*	10	*	*	*	*
USDA	389	12	295	295	*	*	*	21	56	*	5	*	*	*	*
DOT	61	8	12	12	*	*	6	13	11	6	*	5	*	*	*
JUSTICE	26	6	12	12	*	*	*	*	4	*	*	4	*	*	*
HUD	37	14	*	*	*	*	*	*	*	6	5	12	*	*	*
INTERIOR	25	6	13	13	*	*	*	*	6	*	*	*	*	*	*
OTHER	636	24	224	224	*	*	263	38	87	*	*	*	*	*	*
SOURCE UNKNOWN	81	*	46	46	*	*	25	*	*	*	6	4	*	*	*
SOURCE NOT REPORTED	56	*	54	54	*	*	*	*	*	*	*	2	*	*	*
SUPPORT STATUS UNKNOWN	677	39	489	470	19	*	108	*	*	*	41	*	*	*	*
NOT SUPPORTED	6,751	2,791	2,942	2,905	37	*	651	145	*	*	133	75	6	*	8
NO REPORT	247	65	66	66	*	*	28	5	*	*	*	6	*	*	77
NOT EMPLOYED	1,015	*	*	*	*	*	*	*	*	*	*	*	*	1,015	*
PSYCHOLOGISTS TOTAL	35,718	5,525	18,572	16,632	675	1,265	5,386	1,262	1,231	190	828	515	41	1,994	174
TOTAL SUPPORTED	11,341	1,039	5,137	4,777	45	315	2,737	525	1,231	190	263	219	*	*	*
NASA	122	20	64	64	*	*	*	13	25	*	*	*	*	*	*
NSF	647	23	574	574	*	*	*	22	28	*	*	*	*	*	*
EPA	50	24	21	21	*	*	*	5	*	*	*	*	*	*	*
ERDA	90	*	32	32	*	*	*	23	35	*	*	*	*	*	*
NRC	11	*	*	*	*	*	*	11	*	*	*	*	*	*	*
AID	25	*	13	13	*	*	*	12	*	*	*	*	*	*	*
HEW, TOTAL	7,315	596	4,020	3,699	26	295	1,672	395	249	32	194	157	*	*	*
NIH	3,171	207	1,921	1,914	*	7	706	124	54	*	88	71	*	*	*
ALCOHOL/DRUG ABUSE&MHA	2,396	118	899	882	*	17	945	153	120	21	50	90	*	*	*
OE	1,044	148	692	433	15	244	60	49	24	*	37	34	*	*	*
OTHER HEW	1,439	197	864	794	11	59	169	110	51	11	25	12	*	*	*
DOD	1,299	236	253	253	*	*	54	32	566	158	*	*	*	*	*
COMMERCE	75	12	6	6	*	*	*	*	57	*	*	*	*	*	*
USDA	114	12	71	71	*	*	*	12	19	*	*	*	*	*	*
DOT	180	57	25	25	*	*	*	31	47	*	20	*	*	*	*
JUSTICE	394	92	144	122	12	10	27	48	67	*	11	5	*	*	*
HUD	21	*	11	5	*	6	*	2	8	*	*	*	*	*	*
INTERIOR	28	*	*	*	*	*	9	19	*	*	*	*	*	*	*
OTHER	1,684	131	286	279	*	7	910	57	217	*	44	39	*	*	*
SOURCE UNKNOWN	277	23	108	96	7	5	102	20	*	*	*	24	*	*	*
SOURCE NOT REPORTED	131	*	78	63	*	15	41	*	*	*	*	12	*	*	*
SUPPORT STATUS UNKNOWN	1,896	138	1,101	865	110	126	482	31	*	*	71	73	*	*	*
NOT SUPPORTED	19,854	4,234	12,124	10,822	506	796	2,078	691	*	*	483	203	41	*	*
NO REPORT	633	114	210	168	14	28	89	15	*	*	11	20	*	*	174
NOT EMPLOYED	1,994	*	*	*	*	*	*	*	*	*	*	*	*	1,994	*

* NO CASES REPORTED

TABLE B-29. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SUPPORTING AGENCY, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND SUPPORTING AGENCY	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
SOCIAL SCIENTISTS															
TOTAL	45,849	2,582	33,398	32,261	908	229	87	1,962	2,643	156	801	425	404	3,122	269
TOTAL SUPPORTED	11,727	728	6,397	6,200	144	53	60	983	2,643	156	439	196	123	*	2
NASA	101	6	70	55	*	15	*	*	25	*	*	*	*	*	*
NSF	1,386	63	1,116	1,116	*	*	*	147	36	*	*	22	*	*	2
EPA	263	69	177	162	*	15	*	17	*	*	*	*	*	*	*
ERDA	366	94	161	147	14	*	*	97	14	*	*	*	*	*	*
NRC	132	68	7	7	*	*	*	33	24	*	*	*	*	*	*
AID	488	42	224	224	*	*	*	56	152	*	*	*	14	*	*
HEW, TOTAL	3,295	223	2,196	2,082	61	53	55	297	300	8	151	59	6	*	*
NIH	936	*	772	745	12	15	26	51	42	6	27	12	*	*	*
ALCOHOL/DRUG ABUSE&MHA	375	47	238	238	*	*	29	7	25	*	17	12	*	*	*
OE	923	55	765	678	34	53	*	46	10	*	18	23	6	*	*
OTHER HEW	1,309	140	593	563	15	15	*	208	223	2	119	24	*	*	*
DOD	1,025	107	383	383	*	*	*	86	303	146	*	*	*	*	*
COMMERCE	560	86	142	142	*	*	*	49	173	*	99	11	*	*	*
USDA	632	13	464	464	*	*	*	18	122	*	15	*	*	*	*
DOT	319	85	126	126	*	*	*	19	35	*	39	15	*	*	*
JUSTICE	397	38	207	207	*	*	*	74	26	*	17	35	*	*	*
HUD	452	73	204	204	*	*	20	50	42	*	37	26	*	*	*
INTERIOR	427	40	254	254	*	*	*	28	85	*	6	*	14	*	*
OTHER	3,467	181	1,413	1,367	31	15	5	313	1,300	2	101	77	75	*	*
SOURCE UNKNOWN	202	4	143	105	38	*	*	10	31	*	*	*	14	*	*
SOURCE NOT REPORTED	68	*	45	45	*	*	*	23	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN	1,328	25	1,205	1,064	101	40	*	8	*	*	13	61	16	*	*
NOT SUPPORTED	28,885	1,785	25,331	24,532	663	136	27	952	*	*	318	168	265	*	39
NO REPORT	787	44	465	465	*	*	*	19	*	*	31	*	*	*	228
NOT EMPLOYED	3,122	*	*	*	*	*	*	*	*	*	*	*	*	3,122	*
ECONOMISTS															
TOTAL	11,689	1,385	7,496	7,423	73	*	*	427	950	24	101	22	296	899	89
TOTAL SUPPORTED	3,113	293	1,368	1,368	*	*	*	293	950	24	88	15	82	*	*
NASA	27	6	21	21	*	*	*	*	*	*	*	*	*	*	*
NSF	396	26	276	276	*	*	*	94	*	*	*	*	*	*	*
EPA	75	40	21	21	*	*	*	14	*	*	*	*	*	*	*
ERDA	176	60	74	74	*	*	*	42	*	*	*	*	*	*	*
NRC	55	34	*	*	*	*	*	21	*	*	*	*	*	*	*
AID	180	20	63	63	*	*	*	2	81	*	*	*	14	*	*
HEW, TOTAL	453	19	306	306	*	*	*	72	53	*	*	3	*	*	*
NIH	113	*	111	111	*	*	*	2	*	*	*	*	*	*	*
ALCOHOL/DRUG ABUSE&MHA	23	14	9	9	*	*	*	*	*	*	*	*	*	*	*
OE	92	*	76	76	*	*	*	11	5	*	*	*	*	*	*
OTHER HEW	262	5	147	147	*	*	*	59	48	*	*	3	*	*	*
DOD	232	48	73	73	*	*	*	75	12	24	*	*	*	*	*
COMMERCE	321	63	77	77	*	*	*	33	107	*	41	*	*	*	*
USDA	127	*	96	96	*	*	*	*	31	*	*	*	*	*	*
DOT	104	55	10	10	*	*	*	19	*	*	20	*	*	*	*
JUSTICE	26	14	*	*	*	*	*	*	12	*	*	*	*	*	*
HUD	106	38	31	31	*	*	*	37	*	*	*	*	*	*	*
INTERIOR	61	14	28	28	*	*	*	19	*	*	*	*	*	*	*
OTHER	1,322	122	414	414	*	*	*	42	637	*	27	12	68	*	*
SOURCE UNKNOWN	44	*	21	21	*	*	*	6	17	*	*	*	*	*	*
SOURCE NOT REPORTED	29	*	17	17	*	*	*	12	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN	247	25	206	194	12	*	*	*	*	*	*	*	16	*	*
NOT SUPPORTED	7,175	1,028	5,786	5,725	61	*	*	121	*	*	13	7	198	*	22
NO REPORT	255	39	136	136	*	*	*	13	*	*	*	*	*	*	67
NOT EMPLOYED	899	*	*	*	*	*	*	*	*	*	*	*	*	899	*
SOCIOLOGISTS/ANTHRO.															
TOTAL	10,352	193	8,547	8,293	232	22	14	422	132	*	103	44	*	859	38
TOTAL SUPPORTED	2,447	76	1,981	1,947	28	6	14	157	132	*	76	11	*	*	*
NASA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NSF	383	14	345	345	*	*	*	24	*	*	*	*	*	*	*
EPA	26	*	26	26	*	*	*	*	*	*	*	*	*	*	*
ERDA	21	12	*	*	*	*	*	9	*	*	*	*	*	*	*
NRC	12	12	*	*	*	*	*	*	*	*	*	*	*	*	*
AID	63	*	49	49	*	*	*	14	*	*	*	*	*	*	*
HEW, TOTAL	1,179	57	932	904	22	6	9	70	50	*	50	11	*	*	*
NIH	550	*	475	463	12	*	3	30	28	*	11	3	*	*	*
ALCOHOL/DRUG ABUSE&MHA	194	*	161	161	*	*	6	3	9	*	15	*	*	*	*
OE	164	25	130	124	*	6	*	*	*	*	6	3	*	*	*
OTHER HEW	351	32	225	215	10	*	*	37	13	*	36	8	*	*	*
DOD	97	*	73	73	*	*	*	*	24	*	*	*	*	*	*
COMMERCE	17	*	2	2	*	*	*	*	15	*	*	*	*	*	*
USDA	268	*	248	248	*	*	*	*	12	*	8	*	*	*	*
DOT	8	5	3	3	*	*	*	*	*	*	*	*	*	*	*
JUSTICE	97	9	66	66	*	*	*	11	*	*	11	*	*	*	*
HUD	15	*	12	12	*	*	*	*	*	*	*	3	*	*	*
INTERIOR	82	*	63	63	*	*	*	*	19	*	*	*	*	*	*
OTHER	429	12	333	333	*	*	5	53	12	*	11	3	*	*	*
SOURCE UNKNOWN	43	*	39	33	6	*	*	4	*	*	*	*	*	*	*
SOURCE NOT REPORTED	28	*	28	28	*	*	*	*	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN	332	*	319	297	22	*	*	*	*	*	*	13	*	*	*
NOT SUPPORTED	6,531	115	6,110	5,912	182	16	*	259	*	*	27	20	*	*	*
NO REPORT	183	2	137	137	*	*	*	6	*	*	*	*	*	*	38
NOT EMPLOYED	859	*	*	*	*	*	*	*	*	*	*	*	*	859	*

* NO CASES REPORTED

TABLE B-29. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SUPPORTING AGENCY, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND SUPPORTING AGENCY	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL	HOSPITAL/ CLINIC	NON-PROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
OTHER SOCIAL SCIENTISTS TOTAL....................	23,808	1,004	17,355	16,545	603	207	73	1,113	1,561	132	597	359	108	1,364	142
TOTAL SUPPORTED.........	6,167	359	3,048	2,885	116	47	46	533	1,561	132	275	170	41	*	2
NASA...................	74	*	49	34	*	15	*	*	25	*	*	*	*	*	*
NSF....................	607	23	495	495	*	*	*	29	36	*	*	22	*	*	2
EPA....................	162	29	130	115	*	15	*	3	*	*	*	*	*	*	*
ERDA...................	169	22	87	73	14	*	*	46	14	*	*	*	*	*	*
NRC....................	65	22	7	7	*	*	*	12	24	*	*	*	*	*	*
AID....................	245	22	112	112	*	*	*	40	71	*	*	*	*	*	*
HEW, TOTAL.............	1,663	147	958	872	39	47	46	155	197	8	101	45	6	*	*
NIH.................	273	*	186	171	*	15	23	19	14	6	16	9	*	*	*
ALCOHOL/DRUG ABUSE&MHA	158	33	68	68	*	*	23	4	16	*	2	12	*	*	*
OE..................	667	30	559	478	34	47	*	35	5	*	12	20	6	*	*
OTHER HEW...........	696	103	221	201	5	15	*	112	162	2	83	13	*	*	*
DOD....................	696	59	237	237	*	*	*	11	267	122	*	*	*	*	*
COMMERCE...............	222	23	63	63	*	*	*	16	51	*	58	11	*	*	*
USDA...................	237	13	120	120	*	*	*	18	79	*	7	*	*	*	*
DOT....................	207	25	113	113	*	*	*	*	35	*	19	15	*	*	*
JUSTICE................	274	15	141	141	*	*	*	63	14	*	6	35	*	*	*
HUD....................	331	35	161	161	*	*	20	13	42	*	37	23	*	*	*
INTERIOR...............	284	26	163	163	*	*	*	9	66	*	6	*	14	*	*
OTHER..................	1,716	47	666	620	31	15	*	218	651	2	63	62	7	*	*
SOURCE UNKNOWN.........	115	4	83	51	32	*	*	*	14	*	*	*	14	*	*
SOURCE NOT REPORTED....	11	*	*	*	*	*	*	11	*	*	*	*	*	*	*
SUPPORT STATUS UNKNOWN..	749	*	680	573	67	40	*	8	*	*	13	48	*	*	*
NOT SUPPORTED...........	15,179	642	13,435	12,895	420	120	27	572	*	*	278	141	67	*	17
NO REPORT...............	349	3	192	192	*	*	*	*	*	*	31	*	*	*	123
NOT EMPLOYED............	1,364	*	*	*	*	*	*	*	*	*	*	*	*	1,364	*

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-30. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AREA OF CRITICAL NATIONAL INTEREST, AND TYPE OF EMPLOYER: 1977

FIELD AND AREA OF CRITICAL NATIONAL INTEREST	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
ALL FIELDS															
TOTAL	303,267	71,464	163,101	156,452	4,634	2,015	8,587	10,188	21,353	2,282	3,783	1,545	584	19,030	1,350
EDUCATION	56,822	1,619	53,176	49,459	2,367	1,350	335	762	497	46	231	99	33	*	24
HEALTH	52,838	10,105	28,673	28,320	212	141	6,426	2,364	2,911	665	1,173	456	48	*	17
DEFENSE	15,417	5,896	3,083	3,078	5	*	7	939	4,266	1,169	*	23	10	*	24
ENVIRONMENTAL/POLLUTION	17,578	6,432	7,450	7,237	213	*	22	687	2,029	166	534	238	12	*	8
SPACE	4,182	1,163	1,748	1,745	3	*	16	216	986	53	*	*	*	*	*
CRIME PREVENTION/CONTROL	3,261	265	1,857	1,799	4	54	155	227	227	12	316	202	*	*	*
FOOD/OTHER AGR. PRODUCTS	16,825	4,683	8,519	8,437	75	7	16	250	2,954	15	298	6	84	*	*
ENERGY AND FUEL	28,557	13,458	10,984	10,867	101	16	25	1,576	2,282	14	171	39	5	*	3
OTHER NATURAL RESOURCES	6,757	1,432	3,324	3,288	36	*	9	206	1,506	*	256	14	10	*	*
COMMUNITY DEV./SERVICES	6,982	1,311	4,172	3,926	189	57	489	404	199	9	241	157	*	*	*
HOUSING	1,017	468	420	410	10	*	6	16	59	*	12	36	*	*	*
TRANSP/COMMUNICATIONS	5,553	3,044	1,692	1,672	20	*	6	131	466	21	128	53	12	*	*
OTHER	12,248	2,124	7,498	7,196	222	80	116	797	1,181	20	180	121	170	*	41
DOES NOT APPLY	31,538	11,185	17,775	16,882	717	176	425	800	971	23	125	62	145	*	27
NOT EMPLOYED	19,030	*	*	*	*	*	*	*	*	*	*	*	*	19,030	*
NO REPORT	24,662	8,279	12,730	12,136	460	134	534	813	819	69	118	39	55	*	1,206
PHYSICAL SCIENTISTS															
TOTAL	62,055	22,980	27,081	25,544	1,297	240	542	2,031	3,941	275	213	63	28	4,605	296
EDUCATION	11,645	267	11,225	10,204	833	188	5	61	77	10	*	*	*	*	*
HEALTH	7,047	2,927	2,715	2,703	12	*	496	404	380	64	55	*	6	*	*
DEFENSE	3,679	1,299	878	878	*	*	*	186	1,148	144	*	13	*	*	11
ENVIRONMENTAL/POLLUTION	4,168	2,670	880	806	74	*	2	160	396	*	23	37	*	*	*
SPACE	1,797	355	918	918	*	*	*	128	383	13	*	*	*	*	*
CRIME PREVENTION/CONTROL	238	63	43	43	*	*	*	*	58	12	55	7	*	*	*
FOOD/OTHER AGR. PRODUCTS	1,884	1,206	317	307	10	*	*	4	320	15	22	*	*	*	*
ENERGY AND FUEL	8,383	3,727	3,577	3,561	16	*	*	464	591	*	16	3	5	*	*
OTHER NATURAL RESOURCES	491	348	70	62	8	*	*	*	73	*	*	*	*	*	*
COMMUNITY DEV./SERVICES	452	278	152	131	20	1	*	13	9	*	*	*	*	*	*
HOUSING	138	130	8	8	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS	573	496	*	*	*	*	*	14	63	*	*	*	*	*	*
OTHER	1,061	524	381	353	28	*	*	65	66	*	16	*	9	*	*
DOES NOT APPLY	8,710	5,046	3,165	2,947	182	36	7	257	218	*	11	*	*	*	6
NOT EMPLOYED	4,605	*	*	*	*	*	*	*	*	*	*	*	*	4,605	*
NO REPORT	7,184	3,644	2,752	2,623	114	15	32	275	159	17	15	3	8	*	279
CHEMISTS															
TOTAL	40,650	18,664	14,792	13,698	893	201	446	1,048	1,810	118	184	48	14	3,336	190
EDUCATION	7,124	233	6,821	6,110	550	161	5	24	41	*	*	*	*	*	*
HEALTH	6,430	2,825	2,372	2,360	12	*	400	384	349	41	53	*	6	*	*
DEFENSE	1,023	390	227	227	*	*	*	64	267	62	*	13	*	*	*
ENVIRONMENTAL/POLLUTION	3,627	2,542	599	525	74	*	2	141	288	*	23	32	*	*	*
SPACE	158	70	72	72	*	*	*	2	14	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	193	55	35	35	*	*	*	*	48	*	55	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	1,839	1,206	292	282	10	*	*	4	300	15	22	*	*	*	*
ENERGY AND FUEL	4,567	2,673	1,437	1,437	*	*	*	192	265	*	*	*	*	*	*
OTHER NATURAL RESOURCES	462	346	47	39	8	*	*	*	69	*	*	*	*	*	*
COMMUNITY DEV./SERVICES	306	216	79	61	18	*	*	11	*	*	*	*	*	*	*
HOUSING	108	108	*	*	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS	392	346	*	*	*	*	*	11	35	*	*	*	*	*	*
OTHER	667	409	186	159	27	*	*	47	20	*	5	*	*	*	*
DOES NOT APPLY	5,905	4,277	1,438	1,291	122	25	7	97	69	*	11	*	*	*	6
NOT EMPLOYED	3,336	*	*	*	*	*	*	*	*	*	*	*	*	3,336	*
NO REPORT	4,513	2,968	1,187	1,100	72	15	32	71	45	*	15	3	8	*	184
PHYSICISTS/ASTRONOMERS															
TOTAL	21,405	4,316	12,289	11,846	404	39	96	983	2,131	157	29	15	14	1,269	106
EDUCATION	4,521	34	4,404	4,094	283	27	*	37	36	10	*	*	*	*	*
HEALTH	617	102	343	343	*	*	96	20	31	23	2	*	*	*	*
DEFENSE	2,656	909	651	651	*	*	*	122	881	82	*	*	*	*	11
ENVIRONMENTAL/POLLUTION	541	128	281	281	*	*	*	19	108	*	*	5	*	*	*
SPACE	1,639	285	846	846	*	*	*	126	369	13	*	*	*	*	*
CRIME PREVENTION/CONTROL	45	8	8	8	*	*	*	*	10	12	*	7	*	*	*
FOOD/OTHER AGR. PRODUCTS	45	*	25	25	*	*	*	*	20	*	*	*	*	*	*
ENERGY AND FUEL	3,816	1,054	2,140	2,124	16	*	*	272	326	*	16	3	5	*	*
OTHER NATURAL RESOURCES	29	2	23	23	*	*	*	*	4	*	*	*	*	*	*
COMMUNITY DEV./SERVICES	146	62	73	70	2	1	*	2	9	*	*	*	*	*	*
HOUSING	30	22	8	8	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS	181	150	*	*	*	*	*	3	28	*	*	*	*	*	*
OTHER	394	115	195	194	1	*	*	18	46	*	11	*	9	*	*
DOES NOT APPLY	2,805	769	1,727	1,656	60	11	*	160	149	*	*	*	*	*	*
NOT EMPLOYED	1,269	*	*	*	*	*	*	*	*	*	*	*	*	1,269	*
NO REPORT	2,671	676	1,565	1,523	42	*	*	204	114	17	*	*	*	*	95

* NO CASES REPORTED

TABLE B-30. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AREA OF CRITICAL NATIONAL INTEREST, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND AREA OF CRITICAL NATIONAL INTEREST	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NON-PROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
MATHEMATICAL SCIENTISTS TOTAL	15,406	1,282	12,228	11,774	360	94	*	261	593	50	23	28	11	833	97
EDUCATION	5,993	59	5,891	5,652	162	77	*	20	20	*	3	*	*	*	*
HEALTH	441	63	344	344	*	*	*	9	14	*	11	*	*	*	*
DEFENSE	862	256	157	157	*	*	*	88	312	39	*	*	*	*	10
ENVIRONMENTAL/POLLUTION	249	45	192	181	11	*	*	3	9	*	*	*	*	*	*
SPACE	114	22	71	71	*	*	*	11	10	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	45	10	12	12	*	*	*	*	19	*	*	4	*	*	*
FOOD/OTHER AGR. PRODUCTS	95	42	53	53	*	*	*	*	*	*	*	*	*	*	*
ENERGY AND FUEL	585	213	276	255	21	*	*	69	20	*	7	*	*	*	*
OTHER NATURAL RESOURCES	111	10	55	55	*	*	*	7	39	*	*	*	*	*	*
COMMUNITY DEV./SERVICES	161	21	140	129	11	*	*	*	*	*	*	*	*	*	*
HOUSING	55	11	34	34	*	*	*	*	10	*	*	*	*	*	*
TRANSP/COMMUNICATIONS	295	65	126	126	*	*	*	2	79	11	*	12	*	*	*
OTHER	199	24	140	139	1	*	*	7	28	*	*	*	*	*	*
DOES NOT APPLY	3,072	182	2,819	2,698	112	9	*	28	22	*	*	10	11	*	*
NOT EMPLOYED	833	*	*	*	*	*	*	*	*	*	*	*	*	833	*
NO REPORT	2,296	259	1,918	1,868	42	8	*	17	11	*	2	2	*	*	87
MATHEMATICIANS TOTAL	13,665	996	11,018	10,566	358	94	*	221	438	50	12	28	*	805	97
EDUCATION	5,507	31	5,439	5,200	162	77	*	20	14	*	3	*	*	*	*
HEALTH	281	27	237	237	*	*	*	7	10	*	*	*	*	*	*
DEFENSE	719	232	104	104	*	*	*	88	246	39	*	*	*	*	10
ENVIRONMENTAL/POLLUTION	147	22	122	111	11	*	*	3	*	*	*	*	*	*	*
SPACE	91	9	71	71	*	*	*	11	*	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	27	*	10	10	*	*	*	*	13	*	*	4	*	*	*
FOOD/OTHER AGR. PRODUCTS	19	*	19	19	*	*	*	*	*	*	*	*	*	*	*
ENERGY AND FUEL	478	183	231	210	21	*	*	38	19	*	7	*	*	*	*
OTHER NATURAL RESOURCES	80	10	42	42	*	*	*	*	28	*	*	*	*	*	*
COMMUNITY DEV./SERVICES	131	19	112	101	11	*	*	*	*	*	*	*	*	*	*
HOUSING	45	11	34	34	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS	247	54	119	119	*	*	*	2	49	11	*	12	*	*	*
OTHER	195	24	136	135	1	*	*	7	28	*	*	*	*	*	*
DOES NOT APPLY	2,772	155	2,559	2,440	110	9	*	28	20	*	*	10	*	*	*
NOT EMPLOYED	805	*	*	*	*	*	*	*	*	*	*	*	*	805	*
NO REPORT	2,121	219	1,783	1,733	42	8	*	17	11	*	2	2	*	*	87
STATISTICIANS TOTAL	1,741	286	1,210	1,208	2	*	*	40	155	*	11	*	11	28	*
EDUCATION	486	28	452	452	*	*	*	*	6	*	*	*	*	*	*
HEALTH	160	36	107	107	*	*	*	2	4	*	11	*	*	*	*
DEFENSE	143	24	53	53	*	*	*	*	66	*	*	*	*	*	*
ENVIRONMENTAL/POLLUTION	102	23	70	70	*	*	*	*	9	*	*	*	*	*	*
SPACE	23	13	*	*	*	*	*	*	10	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	18	10	2	2	*	*	*	*	6	*	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	76	42	34	34	*	*	*	*	*	*	*	*	*	*	*
ENERGY AND FUEL	107	30	45	45	*	*	*	31	1	*	*	*	*	*	*
OTHER NATURAL RESOURCES	31	*	13	13	*	*	*	7	11	*	*	*	*	*	*
COMMUNITY DEV./SERVICES	30	2	28	28	*	*	*	*	*	*	*	*	*	*	*
HOUSING	10	*	*	*	*	*	*	*	10	*	*	*	*	*	*
TRANSP/COMMUNICATIONS	48	11	7	7	*	*	*	*	30	*	*	*	*	*	*
OTHER	4	*	4	4	*	*	*	*	*	*	*	*	*	*	*
DOES NOT APPLY	300	27	260	258	2	*	*	*	2	*	*	*	11	*	*
NOT EMPLOYED	28	*	*	*	*	*	*	*	*	*	*	*	*	28	*
NO REPORT	175	40	135	135	*	*	*	*	*	*	*	*	*	*	*
COMPUTER SPECIALISTS TOTAL	5,822	3,058	2,128	2,118	10	*	12	159	251	78	69	12	*	55	*
EDUCATION	1,266	174	1,087	1,087	*	*	*	3	*	*	2	*	*	*	*
HEALTH	242	87	124	124	*	*	10	5	6	*	8	2	*	*	*
DEFENSE	909	492	136	136	*	*	*	56	147	78	*	*	*	*	*
ENVIRONMENTAL/POLLUTION	83	80	3	*	3	*	*	*	*	*	*	*	*	*	*
SPACE	170	101	48	48	*	*	*	*	21	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	41	*	20	20	*	*	*	*	*	*	21	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	36	15	11	11	*	*	*	*	10	*	*	*	*	*	*
ENERGY AND FUEL	460	286	137	137	*	*	*	37	*	*	*	*	*	*	*
OTHER NATURAL RESOURCES	48	21	17	17	*	*	*	*	10	*	*	*	*	*	*
COMMUNITY DEV./SERVICES	65	45	13	13	*	*	*	*	*	*	7	*	*	*	*
HOUSING	25	25	*	*	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS	420	372	22	22	*	*	*	4	*	*	22	*	*	*	*
OTHER	144	95	33	33	*	*	*	7	9	*	*	*	*	*	*
DOES NOT APPLY	1,122	804	249	242	7	*	*	22	37	*	*	10	*	*	*
NOT EMPLOYED	55	*	*	*	*	*	*	*	*	*	*	*	*	55	*
NO REPORT	736	461	228	228	*	*	2	25	11	*	9	*	*	*	*

* NO CASES REPORTED

TABLE B-30. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AREA OF CRITICAL NATIONAL INTEREST, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND AREA OF CRITICAL NATIONAL INTEREST	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS TOTAL	EDUCATIONAL INSTITUTIONS 4-YEAR COLL/ UNIV.	EDUCATIONAL INSTITUTIONS 2-YEAR COLL.	EDUCATIONAL INSTITUTIONS ELEM/ SEC. SCHOOL	HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
ENVIRONMENTAL SCIENTISTS															
TOTAL....................	13,543	3,103	6,312	6,147	125	40	*	520	2,415	108	424	82	14	517	48
EDUCATION..............	1,802	28	1,688	1,602	48	38	*	48	30	*	8	*	*	*	*
HEALTH.................	84	*	62	62	*	*	*	10	6	*	6	*	*	*	*
DEFENSE................	544	90	156	156	*	*	*	26	212	60	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	3,256	848	1,329	1,288	41	*	*	109	621	34	236	73	6	*	*
SPACE..................	476	27	227	227	*	*	*	27	181	14	*	*	*	*	*
CRIME PREVENTION/CONTROL	18	9	*	*	*	*	*	*	*	*	*	9	*	*	*
FOOD/OTHER AGR. PRODUCTS	196	34	101	101	*	*	*	11	38	*	12	*	*	*	*
ENERGY AND FUEL.........	3,096	1,461	914	909	5	*	*	112	554	*	55	*	*	*	*
OTHER NATURAL RESOURCES.	1,518	303	613	613	*	*	*	69	431	*	94	*	8	*	*
COMMUNITY DEV./SERVICES.	58	2	41	39	2	*	*	6	*	*	9	*	*	*	*
HOUSING................	8	8	*	*	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	1	*	*	*	*	*	*	*	1	*	*	*	*	*	*
OTHER..................	387	59	161	161	*	*	*	37	130	*	*	*	*	*	*
DOES NOT APPLY..........	945	140	699	680	17	2	*	24	78	*	4	*	*	*	*
NOT EMPLOYED............	517	*	*	*	*	*	*	*	*	*	*	*	*	517	*
NO REPORT..............	637	94	321	309	12	*	*	41	133	*	*	*	*	*	48
EARTH SCIENTISTS															
TOTAL....................	10,235	2,700	4,641	4,507	112	22	*	296	1,634	25	331	82	8	470	48
EDUCATION..............	1,471	28	1,400	1,332	48	20	*	29	14	*	*	*	*	*	*
HEALTH.................	57	*	35	35	*	*	*	10	6	*	6	*	*	*	*
DEFENSE................	196	39	44	44	*	*	*	10	90	13	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	2,087	651	734	694	40	*	*	59	362	12	190	73	6	*	*
SPACE..................	225	2	133	133	*	*	*	14	76	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	18	9	*	*	*	*	*	*	*	*	*	9	*	*	*
FOOD/OTHER AGR. PRODUCTS	99	23	49	49	*	*	*	8	19	*	*	*	*	*	*
ENERGY AND FUEL.........	2,815	1,417	795	790	5	*	*	67	490	*	46	*	*	*	*
OTHER NATURAL RESOURCES.	1,336	278	563	563	*	*	*	41	376	*	76	*	2	*	*
COMMUNITY DEV./SERVICES.	58	2	41	39	2	*	*	6	*	*	9	*	*	*	*
HOUSING................	8	8	*	*	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	1	*	*	*	*	*	*	*	1	*	*	*	*	*	*
OTHER..................	221	50	74	74	*	*	*	1	96	*	*	*	*	*	*
DOES NOT APPLY..........	757	110	575	556	17	2	*	20	48	*	4	*	*	*	*
NOT EMPLOYED............	470	*	*	*	*	*	*	*	*	*	*	*	*	470	*
NO REPORT..............	416	83	198	198	*	*	*	31	56	*	*	*	*	*	48
OCEANOGRAPHERS															
TOTAL....................	1,592	135	971	940	13	18	*	56	287	45	63	*	6	29	*
EDUCATION..............	195	*	157	139	*	18	*	19	11	*	8	*	*	*	*
HEALTH.................	13	*	13	13	*	*	*	*	*	*	*	*	*	*	*
DEFENSE................	154	*	91	91	*	*	*	*	30	33	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	563	59	337	336	1	*	*	10	129	12	16	*	*	*	*
SPACE..................	9	8	*	*	*	*	*	*	1	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	74	11	32	32	*	*	*	*	19	*	12	*	*	*	*
ENERGY AND FUEL.........	158	22	54	54	*	*	*	17	56	*	9	*	*	*	*
OTHER NATURAL RESOURCES.	96	12	37	37	*	*	*	6	17	*	18	*	6	*	*
COMMUNITY DEV./SERVICES.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HOUSING................	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OTHER..................	69	5	46	46	*	*	*	4	14	*	*	*	*	*	*
DOES NOT APPLY..........	111	18	93	93	*	*	*	*	*	*	*	*	*	*	*
NOT EMPLOYED............	29	*	*	*	*	*	*	*	*	*	*	*	*	29	*
NO REPORT..............	121	*	111	99	12	*	*	*	10	*	*	*	*	*	*
ATMOSPHERIC SCIENTISTS															
TOTAL....................	1,716	268	700	700	*	*	*	168	494	38	30	*	*	18	*
EDUCATION..............	136	*	131	131	*	*	*	*	5	*	*	*	*	*	*
HEALTH.................	14	*	14	14	*	*	*	*	*	*	*	*	*	*	*
DEFENSE................	194	51	21	21	*	*	*	16	92	14	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	606	138	258	258	*	*	*	40	130	10	30	*	*	*	*
SPACE..................	242	17	94	94	*	*	*	13	104	14	*	*	*	*	*
CRIME PREVENTION/CONTROL	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	23	*	20	20	*	*	*	3	*	*	*	*	*	*	*
ENERGY AND FUEL.........	123	22	65	65	*	*	*	28	8	*	*	*	*	*	*
OTHER NATURAL RESOURCES.	86	13	13	13	*	*	*	22	38	*	*	*	*	*	*
COMMUNITY DEV./SERVICES.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HOUSING................	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OTHER..................	97	4	41	41	*	*	*	32	20	*	*	*	*	*	*
DOES NOT APPLY..........	77	12	31	31	*	*	*	4	30	*	*	*	*	*	*
NOT EMPLOYED............	18	*	*	*	*	*	*	*	*	*	*	*	*	18	*
NO REPORT............. ..	100	11	12	12	*	*	*	10	67	*	*	*	*	*	*

* NO CASES REPORTED

TABLE B-30. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AREA OF CRITICAL NATIONAL INTEREST, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND AREA OF CRITICAL NATIONAL INTEREST	TOTAL	BUSINESS/INDUSTRY	EDUCATIONAL INSTITUTIONS TOTAL	4-YEAR COLL/UNIV.	2-YEAR COLL.	ELEM/SEC. SCHOOL	HOSPITAL/CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
ENGINEERS															
TOTAL....................	46,539	22,870	15,911	15,709	185	17	21	1,551	3,519	686	270	114	23	1,493	81
EDUCATION...............	6,002	309	5,608	5,488	120	*	*	35	47	*	3	*	*	*	*
HEALTH..................	2,040	653	1,157	1,157	*	*	21	81	104	13	11	*	*	*	*
DEFENSE.................	7,130	3,564	932	932	*	*	*	448	1,602	581	*	*	*	*	3
ENVIRONMENTAL/POLLUTION.	3,652	2,068	1,106	1,093	13	*	*	86	171	35	107	79	*	*	*
SPACE...................	1,398	639	400	400	*	*	*	50	295	14	*	*	*	*	*
CRIME PREVENTION/CONTROL	120	36	34	34	*	*	*	23	14	*	13	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	676	342	278	278	*	*	*	*	56	*	*	*	*	*	*
ENERGY AND FUEL.........	12,313	7,219	3,718	3,715	3	*	*	595	730	*	36	12	*	*	3
OTHER NATURAL RESOURCES.	970	555	240	240	*	*	*	25	96	*	52	2	*	*	*
COMMUNITY DEV./SERVICES.	404	256	122	96	26	*	*	*	15	9	2	*	*	*	*
HOUSING.................	227	136	67	67	*	*	*	11	13	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	2,630	1,792	565	565	*	*	*	37	155	10	46	13	12	*	*
OTHER...................	959	493	326	324	2	*	*	42	98	*	*	*	*	*	*
DOES NOT APPLY..........	3,649	2,722	775	737	21	17	*	58	57	13	*	8	*	*	16
NOT EMPLOYED............	1,493	*	*	*	*	*	*	*	*	*	*	*	*	1,493	*
NO REPORT...............	2,876	2,086	583	583	*	*	*	60	66	11	*	*	11	*	59
LIFE SCIENTISTS															
TOTAL....................	78,335	10,064	47,471	46,267	1,074	130	2,539	2,442	6,760	739	1,155	306	63	6,411	385
EDUCATION...............	10,542	156	10,077	9,538	473	66	57	117	67	17	33	8	*	*	10
HEALTH..................	28,055	4,074	17,482	17,372	107	3	2,147	1,269	1,844	497	542	183	*	*	17
DEFENSE.................	220	14	70	65	5	*	*	*	83	53	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	4,493	562	2,626	2,555	71	*	20	274	728	97	136	39	6	*	5
SPACE...................	140	6	51	51	*	*	*	*	71	12	*	*	*	*	*
CRIME PREVENTION/CONTROL	102	2	33	33	*	*	*	34	10	*	15	8	*	*	*
FOOD/OTHER AGR. PRODUCTS	13,084	2,994	7,177	7,125	45	7	16	179	2,407	*	258	4	49	*	*
ENERGY AND FUEL.........	1,199	169	730	672	42	16	6	111	154	14	15	*	*	*	*
OTHER NATURAL RESOURCES.	2,804	117	1,729	1,701	28	*	*	102	755	*	89	12	*	*	*
COMMUNITY DEV./SERVICES.	618	78	475	455	20	*	24	16	19	*	3	3	*	*	*
HOUSING.................	94	40	48	48	*	*	6	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	110	49	49	49	*	*	6	*	6	*	*	*	*	*	*
OTHER...................	989	180	530	510	18	2	44	73	116	18	7	21	*	*	*
DOES NOT APPLY..........	5,413	894	3,930	3,786	116	28	116	167	262	*	34	*	5	*	5
NOT EMPLOYED............	6,411	*	*	*	*	*	*	*	*	*	*	*	*	6,411	*
NO REPORT...............	4,061	729	2,464	2,307	149	8	97	100	238	31	23	28	3	*	348
BIOLOGICAL SCIENTISTS															
TOTAL....................	46,788	4,011	30,829	29,849	852	128	1,124	1,686	3,367	334	446	89	3	4,627	272
EDUCATION...............	8,063	69	7,780	7,344	370	66	30	92	44	11	24	8	*	*	5
HEALTH..................	16,442	1,649	11,468	11,363	102	3	896	822	1,200	168	200	25	*	*	14
DEFENSE.................	143	*	34	34	*	*	*	*	65	44	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	3,058	336	1,960	1,895	65	*	15	240	395	53	54	5	*	*	*
SPACE...................	102	6	51	51	*	*	*	*	33	12	*	*	*	*	*
CRIME PREVENTION/CONTROL	30	*	19	19	*	*	*	5	6	*	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	4,162	881	2,218	2,173	38	7	2	85	859	*	113	4	*	*	*
ENERGY AND FUEL.........	801	119	538	492	30	16	6	92	29	8	9	*	*	*	*
OTHER NATURAL RESOURCES.	1,180	52	747	730	17	*	*	61	294	*	26	*	*	*	*
COMMUNITY DEV./SERVICES.	312	30	252	238	14	*	10	10	7	*	*	3	*	*	*
HOUSING.................	43	28	15	15	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	38	10	28	28	*	*	*	*	*	*	*	*	*	*	*
OTHER...................	680	94	370	352	18	*	29	60	86	13	7	21	*	*	*
DOES NOT APPLY..........	4,168	420	3,347	3,208	111	28	97	130	162	*	7	*	*	*	5
NOT EMPLOYED............	4,627	*	*	*	*	*	*	*	*	*	*	*	*	4,627	*
NO REPORT...............	2,939	317	2,002	1,907	87	8	39	89	187	25	6	23	3	*	248
AGRICULTURAL SCIENTISTS															
TOTAL....................	15,062	2,858	8,331	8,175	154	2	11	185	2,496	*	310	20	54	769	28
EDUCATION...............	1,194	52	1,120	1,061	59	*	*	11	11	*	*	*	*	*	*
HEALTH..................	179	60	91	91	*	*	11	*	11	*	*	6	*	*	*
DEFENSE.................	30	*	30	25	5	*	*	*	*	*	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	856	90	418	412	6	*	*	*	274	*	74	*	*	*	*
SPACE...................	13	*	*	*	*	*	*	*	13	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	11	*	*	*	*	*	*	11	*	*	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	8,513	2,018	4,729	4,722	7	*	*	94	1,482	*	141	*	49	*	*
ENERGY AND FUEL.........	313	32	172	162	10	*	*	*	103	*	6	*	*	*	*
OTHER NATURAL RESOURCES.	1,576	65	941	930	11	*	*	41	461	*	56	12	*	*	*
COMMUNITY DEV./SERVICES.	199	18	169	163	6	*	*	*	12	*	*	*	*	*	*
HOUSING.................	39	6	33	33	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	52	25	21	21	*	*	*	*	6	*	*	*	*	*	*
OTHER...................	152	31	116	114	*	2	*	*	5	*	*	*	*	*	*
DOES NOT APPLY..........	637	236	265	265	*	*	*	22	87	*	22	*	5	*	*
NOT EMPLOYED............	769	*	*	*	*	*	*	*	*	*	*	*	*	769	*
NO REPORT...............	529	225	226	176	50	*	*	6	31	*	11	2	*	*	28

* NO CASES REPORTED

TABLE B-30. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AREA OF CRITICAL NATIONAL INTEREST, AND TYPE OF EMPLOYER: 1977
CONTINUED

			EDUCATIONAL INSTITUTIONS												
FIELD AND AREA OF CRITICAL NATIONAL INTEREST	TOTAL	BUSINESS/ INDUSTRY	TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL	HOSPITAL/ CLINIC	NONPROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
MEDICAL SCIENTISTS															
TOTAL....................	16,485	3,195	8,311	8,243	68	*	1,404	571	897	405	399	197	6	1,015	85
EDUCATION................	1,285	35	1,177	1,133	44	*	27	14	12	6	9	*	*	*	5
HEALTH...................	11,434	2,365	5,923	5,918	5	*	1,240	447	633	329	342	152	*	*	3
DEFENSE..................	47	14	6	6	*	*	*	*	18	9	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	579	136	248	248	*	*	5	34	59	44	8	34	6	*	5
SPACE....................	25	*	*	*	*	*	*	*	25	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	61	2	14	14	*	*	*	18	4	*	15	8	*	*	*
FOOD/OTHER AGR. PRODUCTS	409	95	230	230	*	*	14	*	66	*	4	*	*	*	*
ENERGY AND FUEL..........	85	18	20	18	2	*	*	19	22	6	*	*	*	*	*
OTHER NATURAL RESOURCES.	48	*	41	41	*	*	*	*	*	*	7	*	*	*	*
COMMUNITY DEV./SERVICES.	107	30	54	54	*	*	14	6	*	*	3	*	*	*	*
HOUSING..................	12	6	*	*	*	*	6	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	20	14	*	*	*	*	6	*	*	*	*	*	*	*	*
OTHER....................	157	55	44	44	*	*	15	13	25	5	*	*	*	*	*
DOES NOT APPLY...........	608	238	318	313	5	*	19	15	13	*	5	*	*	*	*
NOT EMPLOYED.............	1,015	*	*	*	*	*	*	*	*	*	*	*	*	1,015	*
NO REPORT................	593	187	236	224	12	*	58	5	20	6	6	3	*	*	72
PSYCHOLOGISTS.............															
TOTAL....................	35,718	5,525	18,572	16,632	675	1,265	5,386	1,262	1,231	190	828	515	41	1,994	174
EDUCATION................	9,593	442	8,423	7,240	349	834	263	228	89	19	80	49	*	*	*
HEALTH...................	11,904	2,207	4,571	4,374	59	138	3,699	362	329	83	384	253	16	*	*
DEFENSE..................	608	105	36	36	*	*	7	11	371	68	*	10	*	*	*
ENVIRONMENTAL/POLLUTION.	219	46	123	123	*	*	*	5	42	*	*	*	*	*	3
SPACE....................	63	10	28	25	3	*	16	*	9	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	1,124	141	418	364	*	54	155	90	100	*	165	55	*	*	*
FOOD/OTHER AGR. PRODUCTS	95	24	36	36	*	*	*	14	19	*	*	2	*	*	*
ENERGY AND FUEL..........	173	43	63	63	*	*	19	19	29	*	*	*	*	*	*
OTHER NATURAL RESOURCES.	35	14	12	12	*	*	9	*	*	*	*	*	*	*	*
COMMUNITY DEV./SERVICES.	1,990	345	836	735	45	56	458	191	14	*	59	87	*	*	*
HOUSING..................	79	38	26	26	*	*	*	*	15	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	253	81	54	54	*	*	*	12	86	*	20	*	*	*	*
OTHER....................	1,399	372	781	697	41	43	55	80	23	*	34	29	25	*	*
DOES NOT APPLY...........	3,331	971	1,785	1,591	122	72	302	121	71	10	41	30	*	*	*
NOT EMPLOYED.............	1,994	*	*	*	*	*	*	*	*	*	*	*	*	1,994	*
NO REPORT................	2,858	686	1,380	1,256	56	68	403	129	34	10	45	*	*	*	171
SOCIAL SCIENTISTS															
TOTAL....................	45,849	2,582	33,398	32,261	908	229	87	1,962	2,643	156	801	425	404	3,122	269
EDUCATION................	9,979	184	9,177	8,648	382	147	10	250	167	*	102	42	33	*	14
HEALTH...................	3,025	94	2,218	2,184	34	*	53	224	228	8	156	18	26	*	*
DEFENSE..................	1,465	76	718	718	*	*	*	124	391	146	*	*	10	*	*
ENVIRONMENTAL/POLLUTION.	1,458	113	1,191	1,191	*	*	*	50	62	*	32	10	*	*	*
SPACE....................	24	3	5	5	*	*	*	*	16	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	1,573	4	1,297	1,293	4	*	*	80	26	*	47	119	*	*	*
FOOD/OTHER AGR. PRODUCTS	759	26	546	526	20	*	*	42	104	*	6	*	35	*	*
ENERGY AND FUEL..........	2,348	340	1,569	1,555	14	*	*	169	204	*	42	24	*	*	*
OTHER NATURAL RESOURCES.	780	64	588	588	*	*	*	3	102	*	21	*	2	*	*
COMMUNITY DEV./SERVICES.	3,234	286	2,393	2,328	65	*	7	178	142	*	161	67	*	*	*
HOUSING..................	391	80	237	227	10	*	*	5	21	*	12	36	*	*	*
TRANSP/COMMUNICATIONS...	1,271	189	876	856	20	*	*	62	76	*	40	28	*	*	*
OTHER....................	7,110	377	5,146	4,979	132	35	17	486	711	2	123	71	136	*	41
DOES NOT APPLY...........	5,296	426	4,353	4,201	140	12	*	123	226	*	35	4	129	*	*
NOT EMPLOYED.............	3,122	*	*	*	*	*	*	*	*	*	*	*	*	3,122	*
NO REPORT................	4,014	320	3,084	2,962	87	35	*	166	167	*	24	6	33	*	214
ECONOMISTS															
TOTAL....................	11,689	1,385	7,496	7,423	73	*	*	427	950	24	101	22	296	899	89
EDUCATION................	1,878	52	1,692	1,652	40	*	*	47	50	*	*	*	25	*	12
HEALTH...................	556	38	395	395	*	*	*	26	83	*	*	*	14	*	*
DEFENSE..................	192	4	68	68	*	*	*	61	35	24	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	415	43	305	305	*	*	*	38	15	*	14	*	*	*	*
SPACE....................	3	3	*	*	*	*	*	*	*	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	37	*	25	25	*	*	*	*	12	*	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	258	12	134	134	*	*	*	*	77	*	*	*	35	*	*
ENERGY AND FUEL..........	1,238	263	758	758	*	*	*	92	100	*	11	14	*	*	*
OTHER NATURAL RESOURCES.	342	37	268	268	*	*	*	3	32	*	*	*	2	*	*
COMMUNITY DEV./SERVICES.	545	86	408	397	11	*	*	11	21	*	16	3	*	*	*
HOUSING..................	128	49	74	74	*	*	*	5	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	289	109	135	135	*	*	*	*	25	*	20	*	*	*	*
OTHER....................	2,099	258	1,271	1,268	3	*	*	90	313	*	40	5	109	*	13
DOES NOT APPLY...........	1,518	271	1,065	1,065	*	*	*	*	101	*	*	*	81	*	*
NOT EMPLOYED.............	899	*	*	*	*	*	*	*	*	*	*	*	*	899	*
NO REPORT................	1,292	160	898	879	19	*	*	54	86	*	*	*	30	*	64

* NO CASES REPORTED

TABLE B-30. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AREA OF CRITICAL NATIONAL INTEREST, AND TYPE OF EMPLOYER: 1977
CONTINUED

FIELD AND AREA OF CRITICAL NATIONAL INTEREST	TOTAL	BUSINESS/ INDUSTRY	EDUCATIONAL INSTITUTIONS				HOSPITAL/ CLINIC	NON-PROFIT ORGS.	FEDERAL GOV'T	MILITARY/ COMM. CORPS	STATE GOV'T	OTHER GOV'T	OTHER	NOT EMPLOYED	NO REPORT
			TOTAL	4-YEAR COLL/ UNIV.	2-YEAR COLL.	ELEM/ SEC. SCHOOL									
SOCIOLOGISTS/ANTHRO. TOTAL	10,352	193	8,547	8,293	232	22	14	422	132	*	103	44	*	859	38
EDUCATION	2,272	51	2,146	2,074	61	11	*	53	2	*	6	14	*	*	*
HEALTH	1,428	*	1,246	1,218	28	*	14	87	33	*	42	6	*	*	*
DEFENSE	52	*	41	41	*	*	*	*	11	*	*	*	*	*	*
ENVIRONMENTAL/POLLUTION	298	*	298	298	*	*	*	*	*	*	*	*	*	*	*
SPACE	5	*	5	5	*	*	*	*	*	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	671	3	646	646	*	*	*	11	*	*	11	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	141	*	125	125	*	*	*	10	*	*	6	*	*	*	*
ENERGY AND FUEL	195	12	165	165	*	*	*	9	9	*	*	*	*	*	*
OTHER NATURAL RESOURCES	63	*	63	63	*	*	*	*	*	*	*	*	*	*	*
COMMUNITY DEV./SERVICES	835	25	713	686	27	*	*	56	12	*	29	*	*	*	*
HOUSING	77	*	77	67	10	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS	38	*	30	30	*	*	*	*	*	*	*	8	*	*	*
OTHER	1,537	14	1,399	1,373	20	6	*	95	13	*	*	16	*	*	*
DOES NOT APPLY	1,138	29	1,029	955	69	5	*	49	31	*	*	*	*	*	*
NOT EMPLOYED	859	*	*	*	*	*	*	*	*	*	*	*	*	859	*
NO REPORT	743	59	564	547	17	*	*	52	21	*	9	*	*	*	58
OTHER SOCIAL SCIENTISTS TOTAL	23,808	1,004	17,355	16,545	603	207	73	1,113	1,561	132	597	359	108	1,364	142
EDUCATION	5,829	81	5,339	4,922	281	136	10	150	115	*	96	28	8	*	2
HEALTH	1,041	56	577	571	6	*	39	111	112	8	114	12	12	*	*
DEFENSE	1,221	72	609	609	*	*	*	63	345	122	*	*	10	*	*
ENVIRONMENTAL/POLLUTION	745	70	588	588	*	*	*	12	47	*	18	10	*	*	*
SPACE	16	*	*	*	*	*	*	*	16	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	865	1	626	622	4	*	*	69	14	*	36	119	*	*	*
FOOD/OTHER AGR. PRODUCTS	360	14	287	267	20	*	*	32	27	*	*	*	*	*	*
ENERGY AND FUEL	915	65	646	632	14	*	*	68	95	*	31	10	*	*	*
OTHER NATURAL RESOURCES	375	27	257	257	*	*	*	*	70	*	21	*	*	*	*
COMMUNITY DEV./SERVICES	1,854	175	1,272	1,245	27	*	7	111	109	*	116	64	*	*	*
HOUSING	186	31	86	86	*	*	*	*	21	*	12	36	*	*	*
TRANSP/COMMUNICATIONS	944	80	711	691	20	*	*	62	51	*	20	20	*	*	*
OTHER	3,474	105	2,476	2,338	109	29	17	301	385	2	83	50	27	*	28
DOES NOT APPLY	2,640	126	2,259	2,181	71	7	*	74	94	*	35	4	48	*	*
NOT EMPLOYED	1,364	*	*	*	*	*	*	*	*	*	*	*	*	1,364	*
NO REPORT	1,979	101	1,622	1,536	51	35	*	60	60	*	15	6	3	*	112

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-31. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AREA OF CRITICAL NATIONAL INTEREST, AND PRIMARY WORK ACTIVITY: 1977

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
FIELD AND AREA OF CRITICAL NATIONAL INTEREST	TOTAL	TOTAL	BASIC RE-SEARCH	APPL'D RE-SEARCH	DEVEL-OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH-ING	CON-SULT-ING	SALES/ PROF. SER-VICES	OTHER	NOT EM-PLOYED	NO REPORT
ALL FIELDS															
TOTAL....................	303,267	93,460	43,545	36,413	13,502	60,464	30,733	22,150	7,581	90,392	6,141	15,183	12,785	19,030	5,812
EDUCATION..............	56,822	7,219	5,049	1,575	595	9,502	1,721	5,781	2,000	36,417	509	1,320	1,313	*	542
HEALTH.................	52,838	21,559	15,582	5,084	893	10,691	5,276	3,920	1,495	9,163	902	7,731	2,043	*	749
DEFENSE................	15,417	7,999	1,227	4,170	2,202	5,277	3,645	1,097	535	1,227	262	93	793	*	166
ENVIRONMENTAL/POLLUTION.	17,578	6,142	2,271	2,996	875	5,022	2,887	1,647	488	3,897	822	303	1,119	*	273
SPACE..................	4,182	2,430	1,156	762	512	1,088	812	173	103	510	26	31	64	*	33
CRIME PREVENTION/CONTROL	3,261	447	113	245	89	683	242	361	80	1,344	61	464	214	*	48
FOOD/OTHER AGR. PRODUCTS	16,825	7,670	2,611	4,557	502	4,082	2,818	959	305	2,784	493	501	1,069	*	226
ENERGY AND FUEL.........	28,557	12,683	3,628	6,789	2,266	8,092	5,205	2,000	887	4,875	923	346	1,295	*	343
OTHER NATURAL RESOURCES.	6,757	2,332	785	1,309	238	1,649	1,021	402	226	1,913	257	82	435	*	89
COMMUNITY DEV./SERVICES.	6,982	897	267	481	149	1,646	483	988	175	2,809	307	783	389	*	151
HOUSING................	1,017	254	120	82	52	252	85	119	48	282	84	48	86	*	11
TRANSP/COMMUNICATIONS...	5,553	2,391	397	1,161	833	1,653	1,037	477	139	1,071	90	101	202	*	45
OTHER..................	12,248	3,336	1,553	1,332	451	2,343	956	1,092	295	4,712	325	422	859	*	251
DOES NOT APPLY..........	31,538	10,321	4,850	3,347	2,124	4,831	2,521	1,778	532	11,813	627	1,651	1,777	*	518
NOT EMPLOYED............	19,030	*	*	*	*	*	*	*	*	*	*	*	*	19,030	
NO REPORT..............	24,662	8,180	3,936	2,523	1,721	3,653	2,024	1,356	273	7,575	453	1,307	1,127	*	2,367
PHYSICAL SCIENTISTS															
TOTAL....................	62,055	24,817	12,165	10,109	2,543	13,152	8,467	3,394	1,291	14,693	410	1,078	2,362	4,605	938
EDUCATION..............	11,645	1,617	1,499	86	32	1,424	228	922	274	8,249	19	22	233	*	81
HEALTH.................	7,047	3,742	2,391	1,170	181	1,909	1,103	582	224	779	73	148	338	*	58
DEFENSE................	3,679	2,195	577	1,379	239	1,102	901	143	58	169	14	20	142	*	37
ENVIRONMENTAL/POLLUTION.	4,168	1,603	500	860	243	1,593	1,075	338	180	435	107	108	261	*	61
SPACE..................	1,797	1,156	753	263	140	328	291	12	25	275	*	14	21	*	3
CRIME PREVENTION/CONTROL	238	25	*	13	12	109	80	29	*	27	*	*	72	*	5
FOOD/OTHER AGR. PRODUCTS	1,884	960	458	411	91	629	498	114	17	104	3	74	102	*	12
ENERGY AND FUEL.........	8,383	4,557	2,067	2,244	246	2,118	1,569	349	200	1,162	74	109	284	*	79
OTHER NATURAL RESOURCES.	491	263	94	126	43	131	121	10	*	44	12	5	26	*	10
COMMUNITY DEV./SERVICES.	452	73	21	52	*	173	79	92	2	116	13	26	45	*	6
HOUSING................	138	42	21	21	*	70	42	11	17	*	*	*	24	*	2
TRANSP/COMMUNICATIONS...	573	316	56	222	38	220	200	7	13	*	3	*	34	*	*
OTHER..................	1,061	523	191	246	86	236	122	99	15	188	6	31	65	*	12
DOES NOT APPLY..........	8,710	4,275	1,949	1,707	619	1,719	1,203	348	168	1,770	37	370	450	*	89
NOT EMPLOYED............	4,605	*	*	*	*	*	*	*	*	*	*	*	*	4,605	*
NO REPORT..............	7,184	3,470	1,588	1,309	573	1,391	955	338	98	1,375	49	151	265	*	483
CHEMISTS															
TOTAL....................	40,650	15,546	7,008	6,774	1,764	9,560	6,242	2,422	896	8,647	248	822	1,796	3,336	695
EDUCATION..............	7,124	818	739	61	18	805	147	521	137	5,285	6	22	132	*	56
HEALTH.................	6,430	3,540	2,282	1,085	173	1,728	1,041	507	180	651	59	100	302	*	50
DEFENSE................	1,023	570	222	309	39	263	225	21	17	84	*	13	68	*	25
ENVIRONMENTAL/POLLUTION.	3,627	1,438	406	803	229	1,458	1,011	296	151	279	83	94	224	*	51
SPACE..................	158	116	57	59	*	16	16	*	*	9	*	14	*	*	3
CRIME PREVENTION/CONTROL	193	17	*	5	12	97	80	17	*	19	*	*	55	*	5
FOOD/OTHER AGR. PRODUCTS	1,839	960	458	411	91	609	478	114	17	79	3	74	102	*	12
ENERGY AND FUEL.........	4,567	2,302	961	1,160	181	1,405	1,015	257	133	516	12	74	220	*	38
OTHER NATURAL RESOURCES.	462	248	90	125	33	127	117	10	*	36	12	5	24	*	10
COMMUNITY DEV./SERVICES.	306	51	8	43	*	135	67	68	*	57	12	16	35	*	*
HOUSING................	108	25	13	12	*	70	42	11	17	*	*	*	11	*	2
TRANSP/COMMUNICATIONS...	392	199	35	139	25	159	146	*	13	*	*	*	34	*	*
OTHER..................	667	308	85	186	37	178	98	65	15	107	6	12	44	*	12
DOES NOT APPLY..........	5,905	2,868	991	1,380	497	1,420	1,019	248	153	883	19	271	367	*	77
NOT EMPLOYED............	3,336	*	*	*	*	*	*	*	*	*	*	*	*	3,336	*
NO REPORT..............	4,513	2,086	661	996	429	1,090	740	287	63	642	36	127	178	*	354
PHYSICISTS/ASTRONOMERS															
TOTAL....................	21,405	9,271	5,157	3,335	779	3,592	2,225	972	395	6,046	162	256	566	1,269	243
EDUCATION..............	4,521	799	760	25	14	619	81	401	137	2,964	13	*	101	*	25
HEALTH.................	617	202	109	85	8	181	62	75	44	128	14	48	36	*	8
DEFENSE................	2,656	1,625	355	1,070	200	839	676	122	41	85	14	7	74	*	12
ENVIRONMENTAL/POLLUTION.	541	165	94	57	14	135	64	42	29	156	24	14	37	*	10
SPACE..................	1,639	1,040	696	204	140	312	275	12	25	266	*	*	21	*	*
CRIME PREVENTION/CONTROL	45	8	*	8	*	12	*	12	*	8	*	*	17	*	*
FOOD/OTHER AGR. PRODUCTS	45	*	*	*	*	20	20	*	*	25	*	*	*	*	*
ENERGY AND FUEL.........	3,816	2,255	1,106	1,084	65	713	554	92	67	646	62	35	64	*	41
OTHER NATURAL RESOURCES.	29	15	4	1	10	4	4	*	*	8	*	*	2	*	*
COMMUNITY DEV./SERVICES.	146	22	13	9	*	38	12	24	2	59	1	10	10	*	6
HOUSING................	30	17	8	9	*	*	*	*	*	*	*	*	13	*	*
TRANSP/COMMUNICATIONS...	181	117	21	83	13	61	54	7	*	*	3	*	*	*	*
OTHER..................	394	215	106	60	49	58	24	34	*	81	*	19	21	*	*
DOES NOT APPLY..........	2,805	1,407	958	327	122	299	184	100	15	887	18	99	83	*	12
NOT EMPLOYED............	1,269	*	*	*	*	*	*	*	*	*	*	*	*	1,269	*
NO REPORT..............	2,671	1,384	927	313	144	301	215	51	35	733	13	24	87	*	129

* NO CASES REPORTED

TABLE B-31. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AREA OF
CONTINUED CRITICAL NATIONAL INTEREST, AND PRIMARY WORK ACTIVITY: 1977

FIELD AND AREA OF CRITICAL NATIONAL INTEREST	TOTAL	RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
		TOTAL	BASIC RE-SEARCH	APPL'D RE-SEARCH	DEVEL-OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH-ING	CON-SULT-ING	SALES/ PROF. SER-VICES	OTHER	NOT EM-PLOYED	NO REPORT
MATHEMATICAL SCIENTISTS															
TOTAL....................	15,406	3,294	1,823	1,080	391	1,382	288	802	292	9,076	145	78	407	833	191
EDUCATION...............	5,993	826	717	65	44	623	41	410	172	4,380	*	18	107	*	39
HEALTH..................	441	180	79	74	27	55	*	37	18	179	*	*	25	*	2
DEFENSE.................	862	508	61	320	127	185	117	48	20	64	10	14	62	*	19
ENVIRONMENTAL/POLLUTION.	249	116	62	54	*	4	4	*	*	126	*	*	3	*	*
SPACE...................	114	69	13	45	11	13	13	*	*	17	2	*	13	*	*
CRIME PREVENTION/CONTROL	45	39	*	23	16	2	*	*	2	*	*	*	4	*	*
FOOD/OTHER AGR. PRODUCTS	95	40	*	19	21	10	10	*	*	45	*	*	*	*	*
ENERGY AND FUEL.........	585	211	34	164	13	67	12	28	27	195	87	7	18	*	*
OTHER NATURAL RESOURCES.	111	70	*	48	22	10	*	10	*	26	*	*	*	*	5
COMMUNITY DEV./SERVICES.	161	2	*	*	2	26	3	23	*	114	12	*	*	*	7
HOUSING.................	55	10	*	*	10	*	*	*	*	34	*	*	11	*	*
TRANSP/COMMUNICATIONS...	295	201	87	83	31	33	7	15	11	59	*	*	2	*	*
OTHER...................	199	62	25	15	22	11	11	*	*	111	2	*	9	*	4
DOES NOT APPLY..........	3,072	520	415	94	11	166	20	123	23	2,263	19	16	85	*	3
NOT EMPLOYED............	833	*	*	*	*	*	*	*	*	*	*	*	*	833	*
NO REPORT...............	2,296	440	330	76	34	177	50	108	19	1,463	13	23	68	*	112
MATHEMATICIANS															
TOTAL....................	13,665	2,842	1,679	863	300	1,145	207	715	223	8,187	78	78	344	805	186
EDUCATION...............	5,507	746	665	55	26	531	20	372	139	4,086	*	18	87	*	39
HEALTH..................	281	127	43	57	27	37	*	37	*	100	*	*	15	*	2
DEFENSE.................	719	444	61	280	103	160	92	48	20	32	*	14	50	*	19
ENVIRONMENTAL/POLLUTION.	147	66	44	22	*	*	*	*	*	78	*	*	3	*	*
SPACE...................	91	59	13	35	11	13	13	*	*	17	2	*	*	*	*
CRIME PREVENTION/CONTROL	27	23	*	23	*	*	*	*	*	*	*	*	4	*	*
FOOD/OTHER AGR. PRODUCTS	19	*	*	*	*	*	*	*	*	19	*	*	*	*	*
ENERGY AND FUEL.........	478	174	23	138	13	66	12	28	26	174	39	7	18	*	*
OTHER NATURAL RESOURCES.	80	52	*	30	22	10	*	10	*	18	*	*	*	*	*
COMMUNITY DEV./SERVICES.	131	*	*	*	*	26	3	23	*	88	10	*	*	*	7
HOUSING.................	45	*	*	*	*	*	*	*	*	34	*	*	11	*	*
TRANSP/COMMUNICATIONS...	247	184	83	70	31	9	7	2	*	52	*	*	2	*	*
OTHER...................	195	60	23	15	22	11	11	*	*	109	2	*	9	*	4
DOES NOT APPLY..........	2,772	497	405	81	11	139	9	107	23	2,028	12	16	77	*	3
NOT EMPLOYED............	805	*	*	*	*	*	*	*	*	*	*	*	*	805	*
NO REPORT...............	2,121	410	319	57	34	143	40	88	15	1,352	13	23	68	*	112
STATISTICIANS															
TOTAL....................	1,741	452	144	217	91	237	81	87	69	889	67	*	63	28	5
EDUCATION...............	486	80	52	10	18	92	21	38	33	294	*	*	20	*	*
HEALTH..................	160	53	36	17	*	18	*	*	18	79	*	*	10	*	*
DEFENSE.................	143	64	*	40	24	25	25	*	*	32	10	*	12	*	*
ENVIRONMENTAL/POLLUTION.	102	50	18	32	*	4	4	*	*	48	*	*	*	*	*
SPACE...................	23	10	*	10	*	*	*	*	*	*	*	*	13	*	*
CRIME PREVENTION/CONTROL	18	16	*	*	16	2	*	*	2	*	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	76	40	*	19	21	10	10	*	*	26	*	*	*	*	*
ENERGY AND FUEL.........	107	37	11	26	*	1	*	*	1	21	48	*	*	*	*
OTHER NATURAL RESOURCES.	31	18	*	18	*	*	*	*	*	8	*	*	*	*	5
COMMUNITY DEV./SERVICES.	30	2	*	*	2	*	*	*	*	26	2	*	*	*	*
HOUSING.................	10	10	*	*	10	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	48	17	4	13	*	24	*	13	11	7	*	*	*	*	*
OTHER...................	4	2	2	*	*	*	*	*	*	2	*	*	*	*	*
DOES NOT APPLY..........	300	23	10	13	*	27	11	16	*	235	7	*	8	*	*
NOT EMPLOYED............	28	*	*	*	*	*	*	*	*	*	*	*	*	28	*
NO REPORT...............	175	30	11	19	*	34	10	20	4	111	*	*	*	*	*
COMPUTER SPECIALISTS															
TOTAL....................	5,822	2,599	283	494	1,822	1,402	735	466	201	1,192	155	65	216	55	138
EDUCATION...............	1,266	258	117	54	87	252	122	81	49	698	21	16	17	*	4
HEALTH..................	242	94	3	18	73	87	51	26	10	41	*	*	9	*	11
DEFENSE.................	909	443	43	134	266	294	186	65	43	59	29	14	41	*	29
ENVIRONMENTAL/POLLUTION.	83	41	*	*	41	10	10	*	*	3	29	*	*	*	*
SPACE...................	170	125	*	43	82	32	12	11	9	4	*	*	*	*	9
CRIME PREVENTION/CONTROL	41	21	*	*	21	*	*	*	*	20	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	36	25	*	*	25	11	*	*	11	*	*	*	*	*	*
ENERGY AND FUEL.........	460	217	7	32	178	139	63	67	9	58	26	10	10	*	*
OTHER NATURAL RESOURCES.	48	21	*	10	11	18	*	10	8	9	*	*	*	*	*
COMMUNITY DEV./SERVICES.	65	32	*	*	32	20	20	*	*	13	*	*	*	*	*
HOUSING.................	25	14	*	*	14	11	*	11	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	420	238	28	60	150	109	81	19	9	9	7	*	32	*	25
OTHER...................	144	79	2	15	62	30	13	7	10	24	*	*	9	*	2
DOES NOT APPLY..........	1,122	603	49	85	469	261	91	136	34	146	22	13	64	*	13
NOT EMPLOYED............	55	*	*	*	*	*	*	*	*	*	*	*	*	55	*
NO REPORT...............	736	388	34	43	311	128	86	33	9	108	21	12	34	*	45

* NO CASES REPORTED

TABLE B-31. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AREA OF
CONTINUED CRITICAL NATIONAL INTEREST, AND PRIMARY WORK ACTIVITY: 1977

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....									
FIELD AND AREA OF CRITICAL NATIONAL INTEREST	TOTAL	TOTAL	BASIC RE-SEARCH	APPL'D RE-SEARCH	DEVEL-OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH-ING	CON-SULT-ING	SALES/ PROF. SER-VICES	OTHER	NOT EM-PLOYED	NO REPORT
ENVIRONMENTAL SCIENTISTS															
TOTAL....................	13,543	4,884	2,503	2,172	209	3,095	1,631	1,125	339	3,518	364	137	778	517	250
EDUCATION...............	1,802	143	118	25	*	243	41	151	51	1,350	*	*	52	*	14
HEALTH..................	84	56	19	37	*	12	*	6	6	10	*	*	6	*	*
DEFENSE.................	544	291	96	176	19	212	148	52	12	28	*	5	8	*	*
ENVIRONMENTAL/POLLUTION.	3,256	1,176	561	574	41	1,029	506	400	123	563	182	33	233	*	40
SPACE...................	476	318	273	35	10	105	65	40	*	37	*	*	16	*	*
CRIME PREVENTION/CONTROL	18	9	*	9	*	9	*	9	*	*	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	196	84	38	46	*	57	38	19	*	29	19	2	2	*	3
ENERGY AND FUEL.........	3,096	1,512	620	780	112	772	428	257	87	413	70	67	223	*	39
OTHER NATURAL RESOURCES.	1,518	494	238	256	*	367	257	66	44	418	63	22	124	*	30
COMMUNITY DEV./SERVICES.	58	9	*	*	9	18	*	12	6	29	*	*	2	*	*
HOUSING.................	8	*	*	*	*	8	*	8	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	1	*	*	*	*	1	1	*	*	*	*	*	*	*	*
OTHER...................	387	223	160	45	18	61	39	22	*	42	10	5	21	*	25
DOES NOT APPLY..........	945	282	168	114	*	129	64	65	*	442	4	1	59	*	28
NOT EMPLOYED............	517	*	*	*	*	*	*	*	*	*	*	*	*	517	*
NO REPORT...............	637	287	212	75	*	72	44	18	10	157	16	2	32	*	71
EARTH SCIENTISTS															
TOTAL....................	10,235	3,175	1,440	1,591	144	2,330	1,115	931	284	2,988	294	120	637	470	221
EDUCATION...............	1,471	110	85	25	*	197	20	126	51	1,119	*	*	31	*	14
HEALTH..................	57	29	6	23	*	12	*	6	6	10	*	*	6	*	*
DEFENSE.................	196	89	20	69	*	77	55	22	*	17	*	5	8	*	*
ENVIRONMENTAL/POLLUTION.	2,087	514	155	335	24	803	338	371	94	405	140	21	182	*	22
SPACE...................	225	167	149	8	10	15	9	6	*	35	*	*	8	*	*
CRIME PREVENTION/CONTROL	18	9	*	9	*	9	*	9	*	*	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	99	26	1	25	*	21	13	8	*	26	19	2	2	*	3
ENERGY AND FUEL.........	2,815	1,371	542	728	101	690	368	239	83	376	70	67	202	*	39
OTHER NATURAL RESOURCES.	1,336	401	175	226	*	323	220	59	44	391	45	22	124	*	30
COMMUNITY DEV./SERVICES.	58	9	*	*	9	18	*	12	6	29	*	*	2	*	*
HOUSING.................	8	*	*	*	*	8	*	8	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	1	*	*	*	*	1	1	*	*	*	*	*	*	*	*
OTHER...................	221	98	78	20	*	41	23	18	*	42	10	*	14	*	16
DOES NOT APPLY..........	757	222	128	94	*	63	34	29	*	413	4	1	26	*	28
NOT EMPLOYED............	470	*	*	*	*	*	*	*	*	*	*	*	*	470	*
NO REPORT...............	416	130	101	29	*	52	34	18	*	125	6	2	32	*	69
OCEANOGRAPHERS															
TOTAL....................	1,592	789	605	173	11	400	271	101	28	253	29	5	79	29	8
EDUCATION...............	195	12	12	*	*	46	21	25	*	129	*	*	8	*	*
HEALTH..................	13	13	13	*	*	*	*	*	*	*	*	*	*	*	*
DEFENSE.................	154	85	69	16	*	69	27	30	12	*	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	563	341	243	98	*	96	90	*	6	62	11	*	45	*	8
SPACE...................	9	*	*	*	*	9	9	*	*	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	74	38	24	14	*	36	25	11	*	*	*	*	*	*	*
ENERGY AND FUEL.........	158	77	42	24	11	65	52	13	*	6	*	*	10	*	*
OTHER NATURAL RESOURCES.	96	48	41	7	*	12	12	*	*	18	18	*	*	*	*
COMMUNITY DEV./SERVICES.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HOUSING.................	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OTHER...................	69	44	40	4	*	20	16	4	*	*	*	5	*	*	*
DOES NOT APPLY..........	111	49	39	10	*	37	19	18	*	9	*	*	16	*	*
NOT EMPLOYED............	29	*	*	*	*	*	*	*	*	*	*	*	*	29	*
NO REPORT...............	121	82	82	*	*	10	*	*	10	29	*	*	*	*	*
ATMOSPHERIC SCIENTISTS															
TOTAL....................	1,716	920	458	408	54	365	245	93	27	277	41	12	62	18	21
EDUCATION...............	136	21	21	*	*	*	*	*	*	102	*	*	13	*	*
HEALTH..................	14	14	*	14	*	*	*	*	*	*	*	*	*	*	*
DEFENSE.................	194	117	7	91	19	66	66	*	*	11	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	606	321	163	141	17	130	78	29	23	96	31	12	6	*	10
SPACE...................	242	151	124	27	*	81	47	34	*	2	*	*	8	*	*
CRIME PREVENTION/CONTROL	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	23	20	13	7	*	*	*	*	*	3	*	*	*	*	*
ENERGY AND FUEL.........	123	64	36	28	*	17	8	5	4	31	*	*	11	*	*
OTHER NATURAL RESOURCES.	86	45	22	23	*	32	25	7	*	9	*	*	*	*	*
COMMUNITY DEV./SERVICES.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HOUSING.................	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
TRANSP/COMMUNICATIONS...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OTHER...................	97	81	42	21	18	*	*	*	*	*	*	*	7	*	9
DOES NOT APPLY..........	77	11	1	10	*	29	11	18	*	20	*	*	17	*	*
NOT EMPLOYED............	18	*	*	*	*	*	*	*	*	*	*	*	*	18	*
NO REPORT...............	100	75	29	46	*	10	10	*	*	3	10	*	*	*	2

* NO CASES REPORTED

TABLE B-31. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AREA OF
CONTINUED CRITICAL NATIONAL INTEREST, AND PRIMARY WORK ACTIVITY: 1977

		RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....								
FIELD AND AREA OF CRITICAL NATIONAL INTEREST	TOTAL	TOTAL	BASIC RE- SEARCH	APPL'D RE- SEARCH	DEVEL- OPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH	TEACH- ING	CON- SULT- ING	SALES/ PROF. SER- VICES	OTHER	NOT EM- PLOYED	NO REPORT
ENGINEERS															
TOTAL......................	46,539	17,182	1,659	8,653	6,870	14,540	8,648	4,258	1,634	8,813	1,613	665	1,621	1,493	612
EDUCATION................	6,002	538	144	230	164	1,467	244	818	405	3,872	23	13	56	*	33
HEALTH...................	2,040	782	210	398	174	617	356	172	89	439	64	39	40	*	59
DEFENSE..................	7,130	3,543	189	1,833	1,521	2,758	1,911	526	321	349	135	22	277	*	46
ENVIRONMENTAL/POLLUTION.	3,652	1,157	106	600	451	1,227	655	491	81	614	309	58	251	*	36
SPACE....................	1,398	668	45	354	269	545	377	110	58	148	8	12	4	*	13
CRIME PREVENTION/CONTROL	120	43	*	11	32	65	43	*	22	12	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	676	340	30	236	74	225	167	48	10	56	13	36	6	*	*
ENERGY AND FUEL.........	12,313	5,086	558	2,861	1,667	4,308	2,817	1,047	444	1,696	580	99	432	*	112
OTHER NATURAL RESOURCES.	970	308	*	210	98	366	239	103	24	135	82	23	56	*	*
COMMUNITY DEV./SERVICES.	404	107	*	45	62	195	66	129	*	61	13	19	9	*	*
HOUSING..................	227	53	45	*	8	77	34	12	31	46	40	*	11	*	*
TRANSP/COMMUNICATIONS...	2,630	1,299	102	609	588	840	583	221	36	302	37	101	37	*	14
OTHER....................	959	356	34	175	147	233	120	105	8	219	64	30	57	*	*
DOES NOT APPLY..........	3,649	1,596	118	585	893	884	566	250	68	546	136	160	220	*	107
NOT EMPLOYED............	1,493	*	*	*	*	*	*	*	*	*	*	*	*	1,493	*
NO REPORT...............	2,876	1,306	78	506	722	733	470	226	37	318	109	53	165	*	192
LIFE SCIENTISTS															
TOTAL......................	78,335	29,578	19,998	8,660	920	13,674	7,489	4,368	1,817	18,991	1,185	3,039	3,815	6,411	1,642
EDUCATION................	10,542	1,878	1,497	296	85	1,629	343	864	422	6,581	40	109	242	*	63
HEALTH...................	28,055	14,314	11,562	2,456	296	5,431	3,040	1,624	767	4,341	368	2,026	1,156	*	419
DEFENSE..................	220	81	33	28	20	88	75	*	13	32	*	*	14	*	5
ENVIRONMENTAL/POLLUTION.	4,493	1,696	874	739	83	983	582	318	83	1,226	143	56	334	*	55
SPACE....................	140	58	58	*	*	56	45	*	11	13	*	5	*	*	8
CRIME PREVENTION/CONTROL	102	21	8	13	*	24	14	6	4	17	6	7	22	*	5
FOOD/OTHER AGR. PRODUCTS	13,084	6,073	2,060	3,736	277	2,993	2,064	687	242	2,054	426	389	938	*	211
ENERGY AND FUEL.........	1,199	398	240	147	11	339	186	101	52	267	38	15	123	*	19
OTHER NATURAL RESOURCES.	2,804	990	383	543	64	623	352	149	122	889	58	22	204	*	18
COMMUNITY DEV./SERVICES.	618	129	61	60	8	146	55	81	10	242	16	12	63	*	10
HOUSING..................	94	20	10	10	*	12	*	12	*	28	*	21	4	*	9
TRANSP/COMMUNICATIONS...	110	34	14	20	*	39	24	15	*	17	20	*	*	*	*
OTHER....................	989	427	342	65	20	210	117	78	15	252	*	31	57	*	12
DOES NOT APPLY..........	5,413	2,068	1,706	306	56	686	373	249	64	1,937	37	176	430	*	79
NOT EMPLOYED............	6,411	*	*	*	*	*	*	*	*	*	*	*	*	6,411	*
NO REPORT...............	4,061	1,391	1,150	241	*	415	219	184	12	1,095	33	170	228	*	729
BIOLOGICAL SCIENTISTS															
TOTAL......................	46,788	19,187	15,678	3,117	392	6,009	3,129	2,017	863	13,498	425	462	1,688	4,627	892
EDUCATION................	8,063	1,345	1,216	81	48	1,097	197	620	280	5,394	17	14	144	*	52
HEALTH...................	16,442	10,514	9,201	1,205	108	2,212	1,369	549	294	2,668	125	198	526	*	199
DEFENSE..................	143	50	16	28	6	53	43	*	10	21	*	*	14	*	5
ENVIRONMENTAL/POLLUTION.	3,058	1,150	701	419	30	510	236	216	58	1,074	108	18	166	*	32
SPACE....................	102	55	55	*	*	31	26	*	5	13	*	*	*	*	3
CRIME PREVENTION/CONTROL	30	8	8	*	*	6	6	*	*	11	*	*	*	*	5
FOOD/OTHER AGR. PRODUCTS	4,162	2,197	1,155	953	89	835	622	158	55	711	89	77	206	*	47
ENERGY AND FUEL.........	801	283	216	66	1	213	105	73	35	202	25	5	54	*	19
OTHER NATURAL RESOURCES.	1,180	437	291	89	57	216	114	52	50	406	41	*	68	*	12
COMMUNITY DEV./SERVICES.	312	50	39	11	*	67	13	50	4	157	6	6	22	*	4
HOUSING..................	43	10	10	*	*	6	*	6	*	5	*	9	4	*	9
TRANSP/COMMUNICATIONS...	38	*	*	*	*	22	13	9	*	6	10	*	*	*	*
OTHER....................	680	341	289	32	20	88	60	19	9	194	*	23	34	*	*
DOES NOT APPLY..........	4,168	1,640	1,468	139	33	426	212	161	53	1,702	*	42	301	*	57
NOT EMPLOYED............	4,627	*	*	*	*	*	*	*	*	*	*	*	*	4,627	*
NO REPORT...............	2,939	1,107	1,013	94	*	227	113	104	10	934	4	70	149	*	448
AGRICULTURAL SCIENTISTS															
TOTAL......................	15,062	5,542	1,296	3,972	274	3,341	2,120	861	360	2,822	463	510	1,300	769	315
EDUCATION................	1,194	244	56	165	23	243	97	82	64	573	17	55	61	*	1
HEALTH...................	179	93	42	51	*	46	29	17	*	28	*	*	12	*	*
DEFENSE..................	30	25	11	*	14	*	*	*	*	5	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	856	361	96	226	39	230	190	23	17	83	23	27	132	*	*
SPACE....................	13	*	*	*	*	13	13	*	*	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	11	11	*	11	*	*	*	*	*	*	*	*	*	*	*
FOOD/OTHER AGR. PRODUCTS	8,513	3,744	861	2,695	188	2,038	1,341	515	182	1,243	337	275	717	*	159
ENERGY AND FUEL.........	313	85	6	69	10	78	53	8	17	65	6	10	69	*	*
OTHER NATURAL RESOURCES.	1,576	530	82	448	*	401	232	97	72	469	17	22	131	*	6
COMMUNITY DEV./SERVICES.	199	51	10	41	*	48	23	25	*	53	*	*	41	*	6
HOUSING..................	39	10	*	10	*	*	*	*	*	23	*	6	*	*	*
TRANSP/COMMUNICATIONS...	52	20	*	20	*	11	11	*	*	11	10	*	*	*	*
OTHER....................	152	54	40	14	*	38	21	17	*	30	*	8	16	*	6
DOES NOT APPLY..........	637	211	77	134	*	99	64	29	6	138	31	78	69	*	11
NOT EMPLOYED............	769	*	*	*	*	*	*	*	*	*	*	*	*	769	*
NO REPORT...............	529	103	15	88	*	96	46	48	2	101	22	29	52	*	126

* NO CASES REPORTED

TABLE B-31. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AREA OF CRITICAL NATIONAL INTEREST, AND PRIMARY WORK ACTIVITY: 1977
CONTINUED

FIELD AND AREA OF CRITICAL NATIONAL INTEREST	TOTAL	RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....				TEACHING	CONSULTING	SALES/ PROF. SERVICES	OTHER	NOT EMPLOYED	NO REPORT
		TOTAL	BASIC RESEARCH	APPL'D RESEARCH	DEVELOPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH						
MEDICAL SCIENTISTS															
TOTAL......................	16,485	4,849	3,024	1,571	254	4,326	2,240	1,490	594	2,671	297	2,067	827	1,015	435
EDUCATION................	1,285	289	225	50	14	289	49	162	78	614	6	40	37	*	10
HEALTH...................	11,434	3,707	2,319	1,200	188	3,173	1,642	1,058	473	1,645	243	1,828	618	*	220
DEFENSE..................	47	6	6	*	*	35	32	*	3	6	*	*	*	*	*
ENVIRONMENTAL/POLLUTION.	579	185	77	94	14	243	156	79	8	69	12	11	36	*	23
SPACE....................	25	3	3	*	*	12	6	*	6	*	*	5	*	*	5
CRIME PREVENTION/CONTROL	61	2	*	2	*	18	8	6	4	6	6	7	22	*	*
FOOD/OTHER AGR. PRODUCTS	409	132	44	88	*	120	101	14	5	100	*	37	15	*	5
ENERGY AND FUEL..........	85	30	18	12	*	48	28	20	*	*	7	*	*	*	*
OTHER NATURAL RESOURCES.	48	23	10	6	7	6	6	*	*	14	*	*	5	*	*
COMMUNITY DEV./SERVICES.	107	28	12	8	8	31	19	6	6	32	10	6	*	*	*
HOUSING..................	12	*	*	*	*	6	*	6	*	*	*	6	*	*	*
TRANSP/COMMUNICATIONS...	20	14	14	*	*	6	*	6	*	*	*	*	*	*	*
OTHER....................	157	32	13	19	*	84	36	42	6	28	*	*	7	*	6
DOES NOT APPLY...........	608	217	161	33	23	161	97	59	5	97	6	56	60	*	11
NOT EMPLOYED.............	1,015	*	*	*	*	*	*	*	*	*	*	*	*	1,015	*
NO REPORT................	593	181	122	59	*	92	60	32	*	60	7	71	27	*	155
PSYCHOLOGISTS.............															
TOTAL......................	35,718	4,026	1,948	1,765	313	5,920	1,625	3,467	828	10,836	1,481	9,585	1,175	1,994	701
EDUCATION................	9,593	981	419	440	122	1,767	413	1,130	224	5,058	277	1,078	328	*	104
HEALTH...................	11,904	1,435	872	465	98	2,001	468	1,252	281	2,162	340	5,482	340	*	144
DEFENSE..................	608	245	22	223	*	298	187	54	57	7	20	7	31	*	*
ENVIRONMENTAL/POLLUTION.	219	87	35	52	*	20	15	5	*	77	9	23	*	*	3
SPACE....................	63	22	3	19	*	9	9	*	*	11	16	*	5	*	*
CRIME PREVENTION/CONTROL	1,124	110	33	77	*	255	64	167	24	231	55	422	31	*	20
FOOD/OTHER AGR. PRODUCTS	95	21	15	6	*	31	29	2	*	22	19	*	2	*	*
ENERGY AND FUEL..........	173	62	*	62	*	28	12	3	13	22	2	29	19	*	11
OTHER NATURAL RESOURCES.	35	13	*	13	*	*	*	*	*	12	10	*	*	*	*
COMMUNITY DEV./SERVICES.	1,990	125	48	60	17	468	78	299	91	520	178	630	41	*	28
HOUSING..................	79	11	*	11	*	*	*	*	*	26	8	14	20	*	*
TRANSP/COMMUNICATIONS...	253	107	45	62	*	108	76	11	21	17	5	*	16	*	*
OTHER....................	1,399	204	119	67	18	296	82	165	49	442	91	233	112	*	21
DOES NOT APPLY...........	3,331	309	151	129	29	337	129	178	30	1,323	301	846	115	*	100
NOT EMPLOYED.............	1,994	*	*	*	*	*	*	*	*	*	*	*	*	1,994	*
NO REPORT................	2,858	294	186	79	29	302	63	201	38	906	150	821	115	*	270
SOCIAL SCIENTISTS															
TOTAL......................	45,849	7,080	3,166	3,480	434	7,299	1,850	4,270	1,179	23,273	788	536	2,411	3,122	1,340
EDUCATION................	9,979	978	538	379	61	2,097	289	1,405	403	6,229	129	64	278	*	204
HEALTH...................	3,025	956	446	466	44	579	258	221	100	1,212	57	36	129	*	56
DEFENSE..................	1,465	293	206	77	10	340	120	209	11	519	54	11	218	*	30
ENVIRONMENTAL/POLLUTION.	1,458	266	133	117	16	156	40	95	21	853	43	25	37	*	78
SPACE....................	24	14	11	3	*	*	*	*	*	5	*	*	5	*	*
CRIME PREVENTION/CONTROL	1,573	179	72	99	8	219	41	150	28	1,037	*	35	85	*	18
FOOD/OTHER AGR. PRODUCTS	759	127	10	103	14	126	12	89	25	474	13	*	19	*	*
ENERGY AND FUEL..........	2,348	640	102	499	39	321	118	148	55	1,062	46	10	186	*	83
OTHER NATURAL RESOURCES.	780	173	70	103	*	134	52	54	28	380	32	10	25	*	26
COMMUNITY DEV./SERVICES.	3,234	420	137	264	19	600	182	352	66	1,714	75	96	229	*	100
HOUSING..................	391	104	44	40	20	74	9	65	*	148	36	13	16	*	*
TRANSP/COMMUNICATIONS...	1,271	196	65	105	26	303	65	189	49	667	18	*	81	*	6
OTHER....................	7,110	1,462	680	704	78	1,266	452	616	198	3,434	152	92	529	*	175
DOES NOT APPLY...........	5,296	668	294	327	47	649	75	429	145	3,386	71	69	354	*	99
NOT EMPLOYED.............	3,122	*	*	*	*	*	*	*	*	*	*	*	*	3,122	*
NO REPORT................	4,014	604	358	194	52	435	137	248	50	2,153	62	75	220	*	465
ECONOMISTS															
TOTAL......................	11,689	2,517	678	1,705	134	1,940	524	1,160	256	5,115	277	146	562	899	233
EDUCATION................	1,878	161	43	118	*	458	45	339	74	1,140	57	18	44	*	*
HEALTH...................	556	196	61	123	12	84	31	40	13	257	*	*	19	*	*
DEFENSE..................	192	34	17	17	*	100	65	35	*	39	*	*	19	*	*
ENVIRONMENTAL/POLLUTION.	415	108	43	65	*	38	14	24	*	253	14	2	*	*	*
SPACE....................	3	3	*	3	*	*	*	*	*	*	*	*	*	*	*
CRIME PREVENTION/CONTROL	37	*	*	*	*	*	*	*	*	9	*	*	14	*	14
FOOD/OTHER AGR. PRODUCTS	258	84	*	70	14	61	12	36	13	99	*	*	14	*	*
ENERGY AND FUEL..........	1,238	444	29	396	19	127	77	26	24	544	28	10	61	*	24
OTHER NATURAL RESOURCES.	342	149	59	90	*	30	20	10	*	133	20	10	*	*	*
COMMUNITY DEV./SERVICES.	545	74	*	61	13	129	47	66	16	299	7	3	22	*	11
HOUSING..................	128	30	12	18	*	26	*	26	*	57	15	*	*	*	*
TRANSP/COMMUNICATIONS...	289	67	*	57	10	89	42	47	*	93	12	*	28	*	*
OTHER....................	2,099	596	199	372	25	328	93	168	67	854	84	34	169	*	34
DOES NOT APPLY...........	1,518	311	69	224	18	272	32	216	24	763	28	64	78	*	2
NOT EMPLOYED.............	899	*	*	*	*	*	*	*	*	*	*	*	*	899	*
NO REPORT................	1,292	260	146	91	23	198	46	127	25	575	12	5	94	*	148

* NO CASES REPORTED

TABLE B-31. NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, AREA OF
CONTINUED CRITICAL NATIONAL INTEREST, AND PRIMARY WORK ACTIVITY: 1977

FIELD AND AREA OF CRITICAL NATIONAL INTEREST	TOTAL	RESEARCH AND DEVELOPMENT				....MANAGEMENT OR ADMIN....				TEACHING	CONSULTING	SALES/ PROF. SERVICES	OTHER	NOT EMPLOYED	NO REPORT
		TOTAL	BASIC RESEARCH	APPL'D RESEARCH	DEVELOPMENT	TOTAL	OF R&D	OF OTHER THAN R&D	OF BOTH						
SOCIOLOGISTS/ANTHRO. TOTAL......................	10,352	1,641	978	590	73	1,088	349	569	170	5,945	29	71	414	859	305
EDUCATION................	2,272	297	216	58	23	271	33	175	63	1,537	10	*	81	*	76
HEALTH...................	1,428	423	233	184	6	253	118	103	32	629	*	21	46	*	56
DEFENSE..................	52	11	*	11	*	*	*	*	*	28	*	*	*	*	13
ENVIRONMENTAL/POLLUTION.	298	70	36	18	16	22	9	13	*	192	*	*	*	*	14
SPACE....................	5	*	*	*	*	*	*	*	*	5	*	*	*	*	*
CRIME PREVENTION/CONTROL	671	58	39	11	8	32	11	7	14	551	*	3	23	*	4
FOOD/OTHER AGR. PRODUCTS	141	29	10	19	*	17	*	17	*	95	*	*	*	*	*
ENERGY AND FUEL..........	195	47	*	47	*	25	9	16	*	101	*	*	22	*	*
OTHER NATURAL RESOURCES.	63	3	3	*	*	*	*	*	*	60	*	*	*	*	*
COMMUNITY DEV./SERVICES.	835	143	79	64	*	142	55	73	14	486	*	13	33	*	18
HOUSING..................	77	10	10	*	*	10	*	10	*	47	*	*	10	*	*
TRANSP/COMMUNICATIONS...	38	10	10	*	*	6	*	6	*	14	*	*	8	*	*
OTHER....................	1,537	264	170	79	15	124	76	33	15	999	9	6	104	*	31
DOES NOT APPLY..........	1,138	149	82	62	5	101	*	69	32	818	*	*	34	*	36
NOT EMPLOYED............	859	*	*	*	*	*	*	*	*	*	*	*	*	859	*
NO REPORT...............	743	127	90	37	*	85	38	47	*	383	10	28	53	*	57
OTHER SOCIAL SCIENTISTS TOTAL......................	23,808	2,922	1,510	1,185	227	4,271	977	2,541	753	12,213	482	319	1,435	1,364	802
EDUCATION................	5,829	520	279	203	38	1,368	211	891	266	3,552	62	46	153	*	128
HEALTH...................	1,041	337	152	159	26	242	109	78	55	326	57	15	64	*	*
DEFENSE..................	1,221	248	189	49	10	240	55	174	11	452	54	11	199	*	17
ENVIRONMENTAL/POLLUTION.	745	88	54	34	*	96	17	58	21	408	29	23	37	*	64
SPACE....................	16	11	11	*	*	*	*	*	*	*	*	*	5	*	*
CRIME PREVENTION/CONTROL	865	121	33	88	*	187	30	143	14	477	*	32	48	*	*
FOOD/OTHER AGR. PRODUCTS	360	14	*	14	*	48	*	36	12	280	13	*	5	*	*
ENERGY AND FUEL..........	915	149	73	56	20	169	32	106	31	417	18	*	103	*	59
OTHER NATURAL RESOURCES.	375	21	8	13	*	104	32	44	28	187	12	*	25	*	26
COMMUNITY DEV./SERVICES.	1,854	203	58	139	6	329	80	213	36	929	68	80	174	*	71
HOUSING..................	186	64	22	22	20	39	9	29	*	44	21	13	6	*	*
TRANSP/COMMUNICATIONS...	944	119	55	48	16	208	23	136	49	560	6	*	45	*	6
OTHER....................	3,474	602	311	253	38	814	283	415	116	1,581	59	52	256	*	110
DOES NOT APPLY..........	2,640	208	143	41	24	276	43	144	89	1,805	43	5	242	*	61
NOT EMPLOYED............	1,364	*	*	*	*	*	*	*	*	*	*	*	*	1,364	*
NO REPORT...............	1,979	217	122	66	29	152	53	74	25	1,195	40	42	73	*	260

* NO CASES REPORTED

SOURCE: NATIONAL SCIENCE FOUNDATION

APPENDIX C

Reproduction of Questionnaire

OMB No. 099-RO294

1977 SURVEY OF DOCTORATE RECIPIENTS

CONDUCTED BY THE NATIONAL RESEARCH COUNCIL WITH THE SUPPORT OF THE NATIONAL SCIENCE FOUNDATION, THE NATIONAL ENDOWMENT FOR THE HUMANITIES, AND THE NATIONAL INSTITUTES OF HEALTH

THE ACCOMPANYING LETTER requests your assistance in this biennial survey of Ph.D.'s in the humanities, sciences, and engineering.

PLEASE READ the instructions for each question carefully and answer by printing your reply or checking the appropriate box.

PLEASE CHECK the pre-printed information to be certain that it is correct and complete.

PLEASE RETURN the completed form in the enclosed envelope to the Commission on Human Resources, JH 638, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

NOTE: THIS INFORMATION IS SOLICITED UNDER THE AUTHORITY OF THE NATIONAL SCIENCE FOUNDATION ACT OF 1950, AS AMENDED. ALL INFORMATION YOU PROVIDE WILL BE TREATED AS CONFIDENTIAL AND USED FOR STATISTICAL PURPOSES ONLY. INFORMATION WILL BE RELEASED ONLY IN THE FORM OF STATISTICAL SUMMARIES OR IN A FORM WHICH DOES NOT IDENTIFY INFORMATION ABOUT ANY PARTICULAR PERSON. YOUR RESPONSE IS ENTIRELY VOLUNTARY AND YOUR FAILURE TO PROVIDE SOME OR ALL OF THE REQUESTED INFORMATION WILL IN NO WAY ADVERSELY AFFECT YOU.

____

____

____

If your name and address are incorrect, please enter correct information above. Include ZIP CODE.

If there is an alternate address through which you can always be reached, please provide it on the line below. (10)

C/O Number Street City State ZIP Code (11)

1. Date of Birth Mo. Day Year (12-16)	**2. State or Foreign Country of Birth** (17-18)	**3. Citizenship** 0 ☐ U.S.A. 1 ☐ Non-U.S.A., Specify Country ____________ (19) (20-21)	**4. Sex** 1 ☐ M 2 ☐ F (22)

5. What is your racial background?

0 ☐ American Indian or Alaskan Native
1 ☐ Asian or Pacific Islander
2 ☐ Black
3 ☐ White
(23)

5a. Is your ethnic heritage Hispanic?

0 ☐ Yes
1 ☐ No
(24)

6. List in the table below all collegiate and graduate degrees, excluding honorary degrees, that have been awarded to you. Please check the pre-printed information, including the number and name of the specialty from the list on page 4, to be certain that it is correct and complete.

Type of Degree	Granted Mo. Yr.	Major Field (Use Specialties List) Name Number	Institution Name City (or Campus) & State
Bachelor's			
Master's			
Doctorate			
Other (Specify) ________			

7. What was your employment status as of February 6-12, 1977? (Check only one category.)

Employed full-time in field of Ph.D. ☐ 1
Employed full-time in field other than field of Ph.D. ☐ 2
Employed part-time ☐ 3
Were you seeking full-time employment?
1 ☐ Yes 2 ☐ No (66)
Postdoctoral appointment (fellowship, traineeship, research associateship, etc.) ☐ 4
Unemployed and seeking employment ☐ 5
Not employed and not seeking employment ☐ 6
Retired and not employed ☐ 7
Other, specify: ____________ ☐ 8
(65)

7a. If you were employed full-time during February 6-12, 1977, in a field other than your field of Ph.D., what was the MOST important reason for taking the position?

Preferred position outside Ph.D. field ☐ 1
Promoted out of position in Ph.D. field ☐ 2
Better pay ☐ 3
Locational factors ☐ 4
Position in Ph.D. field not available ☐ 5
Other, specify: ____________ ☐ 6
(67)

If you checked 5, 6 or 7, ANSWER ONLY 8a, 9a, 13, 14 and 17 of the following questions.

8. **Which category below best describes the type of organization of your principal employment OR postdoctoral appointment during February 6-12, 1977?** (Check only one category.)

Business or industry .... ☐ 1
Junior college, 2-year college, technical institute .... ☐ 2
Medical school .... ☐ 3
4-Year college .... ☐ 4
University, other than medical school .... ☐ 5
Elementary or secondary school system .... ☐ 6
Private foundation .... ☐ 7
Museum or historical society .... ☐ 8
Research library or archives .... ☐ 9
Hospital or clinic .... ☐ 10
U.S. military service, active duty, or Commissioned Corps, e.g., USPHS, NCAA .... ☐ 11
U.S. government, civilian employee .... ☐ 12
State government .... ☐ 13
Local or other government, specify: ____________________ .... ☐ 14
Non-profit organization, other than those listed above .... ☐ 15
Other, specify: ____________________ .... ☐ 16

(68-69)

8a. **Which of the above categories best describes the type of organization related to your first position following the receipt of your doctorate?** (List only one category)

____

Type of Organization (70-71)

9. **What percent of time did you devote to each of the following activities during the week of February 6-12, 1977?** (Total should equal 100%) **What were your primary (A) and secondary (B) work activities?** (Check only one in each column.)

	%		A		B
Management or administration of					
Research and development	______	(10)	☐	1	☐
Other than research and development	______	(12)	☐	2	☐
Both	______	(14)	☐	3	☐
Basic research	______	(16)	☐	4	☐
Applied research	______	(18)	☐	5	☐
Development of equipment, products, systems, data	______	(20)	☐	6	☐
Development of humanities resource materials	______	(22)	☐	7	☐
Design	______	(24)	☐	8	☐
Teaching	______	(26)	☐	9	☐
Writing, editing	______	(28)	☐	10	☐
Curatorial	______	(30)	☐	11	☐
Production	______	(32)	☐	12	☐
Consulting, specify: ____________	______	(34)	☐	13	☐
Professional services to individuals	______	(36)	☐	14	☐
Quality control, inspection, testing	______	(38)	☐	15	☐
Sales, marketing, purchasing, estimating	______	(40)	☐	16	☐
Other, specify: ____________	______	(42)	☐	17	☐
	Total = 100%			(44-47)	

9a. **Which of the above categories best describes the primary work activity related to your first position following the receipt of your doctorate?**

____

Primary Work Activity Number (48-49)

10. **From the Degree and Employment Specialties List on page 4 select and enter both the number and title of the employment specialty most closely related to your principal employment or postdoctoral appointment during the week of February 6-12, 1977. Write in your specialty if it is not on the list.**

____

Number Title of Employment Specialty (50-52)

11. **Please give the name of your principal employer (organization, company, etc. or, if self employed, write "self"), and actual place of employment as of the week of February 6-12, 1977.**

____

Name of Employer (53-58)

____

Number Street

____

City State ZIP Code (59-63)

12. **What was the basic annual salary* associated with your principal professional employment during the week of February 6-12, 1977? If you were on a postdoctoral appointment (e.g., fellowship, traineeship, research associateship), what was your annual stipend plus allowances?**

$ ____________ per year (64-66)

*NOTE: Basic annual salary is your annual salary before deductions for income tax, social security, retirement, etc., but does not include bonuses, overtime, summer teaching, or other payment for professional work.

IF ACADEMICALLY EMPLOYED:

a. Check whether salary was for ☐ 9-10 months or ☐ 11-12 months. (67)

b. Did you hold a tenured position during February 6-12, 1977? 0 ☐ Yes 1 ☐ No (68)
If Yes, what year was tenure granted? ____________ (69-70)

c. What was the rank of your position? (Check only one.)

1 ☐ Professor
2 ☐ Associate Professor
3 ☐ Assistant professor
4 ☐ Instructor
5 ☐ Lecturer
6 ☐ Other, specify: ____________________ (71)

d. What, if any, administrative position did you hold?

1 ☐ Dean
2 ☐ Department Chairman
3 ☐ President or Chancellor
4 ☐ Vice-President or Vice-Chancellor
5 ☐ Other, specify: ____________________
6 ☐ Does not apply

(72)

13. **How many full-time equivalent years of professional work experience, including teaching, have you had? ____________ Year(s)**
(73-74)

14. **Following completion of your doctorate have you ever held a fellowship, traineeship, or research associateship?** 0 ☐ **Yes** 1 ☐ **No**
(75)

15. **Listed below are selected topics of national interest. If you devoted a proportion of your professional time which you considered significant to any of these problem areas during the week of February 6-12, 1977, please check the box for the one on which you spent the MOST time.**

1 ☐ Health
2 ☐ Defense
3 ☐ Environmental protection, pollution control
4 ☐ Education
5 ☐ Space
6 ☐ Crime prevention and control
7 ☐ Energy and fuel
8 ☐ Food and other agricultural products
9 ☐ Natural resources,other than fuel or food
10 ☐ Community development and services
11 ☐ Housing (planning, design, construction)
12 ☐ Transportation, communications
13 ☐ Cultural life
14 ☐ Other area, specify: ____________
15 ☐ Does not apply

(10-11)

16. **Was any of your work in the week of February 6-12, 1977 supported or sponsored by U.S. Government funds?**

0 ☐ Yes 1 ☐ No 2 ☐ Don't know **(12)**

If Yes, which of the following federal agencies or departments were supporting the work? (Check all that apply.)

13 ☐ Agency for International Development
14 ☐ Energy Research & Development Administration
15 ☐ Environmental Protection Agency
16 ☐ National Aeronautics & Space Administration
17 ☐ National Endowment for the Arts
18 ☐ National Endowment for the Humanities
19 ☐ National Science Foundation
20 ☐ Nuclear Regulatory Commission
21 ☐ Smithsonian Institution
22 ☐ Department of Agriculture
23 ☐ Department of Commerce
24 ☐ Department of Defense

Department of Health. Education, and Welfare
  25 ☐ National Institutes of Health
  26 ☐ Alcohol, Drug Abuse & Mental Health Administration
  27 ☐ National Institute of Education
  28 ☐ Office of Education
  29 ☐ Other, specify: ____________
30 ☐ Department of Housing and Urban Development
31 ☐ Department of the Interior
32 ☐ Department of Justice
33 ☐ Department of Labor
34 ☐ Department of State
35 ☐ Department of Transportation
36 ☐ Other agency or department, specify: ____________
37 ☐ Don't know source agency

17. **If you received your doctoral degree in science or engineering or are employed as a scientist or engineer, please check all that apply below:**

☐ (a) Changed positions during the period 1973 to 1976.
☐ (b) Received doctoral degree in 1965 or later and employed sometime since receiving your doctoral degree in industry, government, or as non-faculty academic staff.
☐ (c) Held a postdoctoral appointment any year during 1970-1976 inclusive.
☐ (d) None of the above apply. **(38-41)**

If you have checked a, b, or c, please give a brief career history starting with the position prior to your present position and continuing back in time for a maximum of four positions after receiving your doctoral degree (Include postdoctoral appointments).

Name and Location (City and State) of Employer	**Position Title**	**Dates Held**	**Primary Work Activity***	**Employment Specialty** (Use Degree & Employment Specialties List)	**Reason for Leaving Position**
1.					
2.					
3.					
4.					

*Enter code (1-17) from the list given in item 9.

(a) Of the positions described above, as well as your present position, please check any in which your doctoral training was/is not being used.
☐ Position 1 ☐ Position 2 ☐ Position 3 ☐ Position 4 ☐ Present Position ☐ None

(74-79)

DEGREE AND EMPLOYMENT SPECIALTIES LIST

MATHEMATICAL SCIENCES

000 - Algebra
010 - Analysis & Functional Analysis
020 - Geometry
030 - Logic
040 - Number Theory
052 - Probability
055 - Math. Statistics (see also 544, 670, 725, 729)
060 - Topology
062 - Operations Research (see also 478)
065 - Applied Mathematics
069 - Combinatorics & Finite Mathematics
091 - Physical Mathematics
098 - Mathematics, General
099 - Mathematics, Other*

COMPUTER SCIENCES

071 - Theory
072 - Software Systems
073 - Hardware Systems
074 - Intelligent Systems
079 - Computer Sciences, Other

PHYSICS & ASTRONOMY

101 - Astronomy
102 - Astrophysics
110 - Atomic & Molecular Physics
120 - Electromagnetism
130 - Mechanics
132 - Acoustics
134 - Fluids
135 - Plasma Physics
136 - Optics
138 - Thermal Physics
140 - Elementary Particles
150 - Nuclear Structure
160 - Solid State
198 - Physics, General
199 - Physics, Other*

CHEMISTRY

200 - Analytical
210 - Inorganic
215 - Synthetic Inorganic & Organometallic
220 - Organic
225 - Synthetic Organic & Natural Products
230 - Nuclear
240 - Physical
245 - Quantum
250 - Theoretical
255 - Structural
260 - Agricultural & Food
265 - Thermodynamics & Material Properties
270 - Pharmaceutical
275 - Polymers
280 - Biochemistry (see also 540)
285 - Chemical Dynamics
298 - Chemistry, General
299 - Chemistry, Other*

EARTH, ENVIRONMENTAL AND MARINE SCIENCES

301 - Mineralogy, Petrology
305 - Geochemistry
310 - Stratigraphy, Sedimentation
320 - Paleontology
330 - Structural Geology
341 - Geophysics (Solid Earth)
350 - Geomorph. & Glacial Geology
391 - Applied Geol., Geol. Engr.
& Econ. Geol.
395 - Fuel Tech. & Petrol. Engr.
(see also 479)
360 - Hydrology & Water Resources
370 - Oceanography
397 - Marine Sciences, Other*
381 - Atmospheric Physics & Chemistry
382 - Atmospheric Dynamics
383 - Atmospheric Sciences, Other*
388 - Environmental Sciences, General
(see also 480, 528)
389 - Environmental Sciences, Other*
398 - Earth Sciences, General
399 - Earth Sciences, Other*

ENGINEERING

400 - Aeronautical & Astronautical
410 - Agricultural
415 - Biomedical
420 - Civil
430 - Chemical
435 - Ceramic
440 - Electrical
445 - Electronics
450 - Industrial & Manufacturing
455 - Nuclear
460 - Engineering Mechanics
465 - Engineering Physics
470 - Mechanical
475 - Metallurgy & Phys. Met. Engr.
476 - Systems Design & Systems Science
(see also 072, 073, 074)
478 - Operations Research (see also 062)
479 - Fuel Technology & Petrol. Engr.
480 - Sanitary & Environmental
486 - Mining
497 - Materials Science Engr.
498 - Engineering, General
499 - Engineering, Other*

AGRICULTURAL SCIENCES

500 - Agronomy
501 - Agricultural Economics
502 - Animal Husbandry
504 - Fish & Wildlife
505 - Forestry
506 - Horticulture
507 - Soils & Soil Science
510 - Animal Science & Animal Nutrition
511 - Phytopathology
517 - Food Science & Technology
(see also 573)
518 - Agriculture, General
519 - Agriculture, Other*

MEDICAL SCIENCES

520 - Medicine & Surgery
522 - Public Health & Epidemiology
523 - Veterinary Medicine
524 - Hospital Administration
526 - Nursing
527 - Parasitology
528 - Environmental Health
534 - Pathology
536 - Pharmacology
537 - Pharmacy
538 - Medical Sciences, General
539 - Medical Sciences, Other*

BIOLOGICAL SCIENCES

540 - Biochemistry (see also 280)
542 - Biophysics
543 - Biomathematics
544 - Biometrics, Biostatistics
(see also 055, 670, 725, 729)
545 - Anatomy
546 - Cytology
547 - Embryology
548 - Immunology
550 - Botany
560 - Ecology
562 - Hydrobiology
564 - Microbiology & Bacteriology
566 - Physiology, Animal
567 - Physiology, Plant
569 - Zoology
570 - Genetics
571 - Entomology
572 - Molecular Biology
573 - Food Science & Technology (see also 517)
574 - Behavior/Ethology
576 - Nutrition & Dietetics
578 - Biological Sciences, General
579 - Biological Sciences, Other*

PSYCHOLOGY

600 - Clinical
610 - Counseling & Guidance
620 - Developmental & Gerontological
630 - Education
635 - School Psychology
641 - Experimental
642 - Comparative
643 - Physiological
650 - Industrial & Personnel
660 - Personality
670 - Psychometrics (see also 055, 544, 725, 729)
680 - Social
698 - Psychology, General
699 - Psychology, Other*

SOCIAL SCIENCES

700 - Anthropology
703 - Archeology
708 - Communications*
709 - Linguistics
710 - Sociology
720 - Economics (see also 501)
725 - Econometrics (see also 055, 544, 670, 729)
729 - Social Statistics (see also 055, 544, 670, 725)
740 - Geography
745 - Area Studies*
751 - Political Science
752 - Public Administration
755 - International Relations
770 - Urban & Regional Planning
775 - History & Philosophy of Science
798 - Social Sciences, General
799 - Social Sciences, Other*

HUMANITIES

802 - History & Criticism of Art
804 - History, American
805 - History, European
806 - History, Other*
808 - American Studies
830 - Music
831 - Speech as a Dramatic Art (see also 885)
833 - Religion (see also 881)
834 - Philosophy
836 - Comparative Literature
878 - Humanities, General
879 - Humanities, Other*
891 - Library & Archival Sciences

LANGUAGES & LITERATURE

811 - American
812 - English
821 - German
822 - Russian
823 - French
824 - Spanish & Portuguese
826 - Italian
827 - Classical*
829 - Other Languages*

EDUCATION & OTHER PROFESSIONAL FIELDS

938 - Education
801 - Art, Applied
881 - Theology (see also 833)
882 - Business Administration
883 - Home Economics
884 - Journalism
885 - Speech & Hearing Sciences (see also 831)
886 - Law, Jurisprudence
887 - Social Work
897 - Professional Field, Other*

899 - OTHER FIELDS*

*Identify the specific field in the space on the questionnaire.